ABSTRACT
OF A
Clinical Lecture
ON THE
RELATION OF TUBERCLE TO SOME OTHER AFFECTIONS OF THE TESTIS.

Delivered at St. Bartholomew's Hospital,

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(Reported by HENRY T. BUTLIN, F.R.C.S., *Surgical Registrar to the Hospital.)*

I HAVE chosen this subject for a clinical lecture chiefly because of the confusion which appears to me to prevail among students concerning the cases to which the term "tuberculous disease" should be applied. I continually hear the question discussed, and the difference of opinion which is so often expressed seems to me to depend, not so much on different views of the actual character of the disease in the particular case under observation, as on the meaning attached to, or the interpretation given to, the word *tubercle*. In illustration of what I say, let me refer for an instant to the state known as fungus testis—the benign fungus, or hernia testis, as it is sometimes called. Most of you are aware that in this hospital such a condition is usually associated with tubercle or scrofula. Such a case is pointed out as one of scrofulous or tuberculous disease, and yet if you refer to works of the highest authority on this subject—for example, to Curling on "Diseases of the Testis," or to Humphry in the fifth volume of the "System of Surgery,"—you will find fungus testis described under the head, not of tuberculous disease, but of chronic orchitis or syphilitic affection. It may be worth while, then, to look at the matter for a few minutes to ascertain whether our own views thereon are sound and clear.

In the first place, let us be accurate in what we mean by the testis. Is this to include the epididymis or not? You know that the word is often used in either sense. Nay, further, the term inflammation of the testicle, or orchitis, is commonly employed to signify an affection in which the epididymis is principally concerned. In the following remarks I shall speak of the epididymis as distinct from the testis. This is important in reference to the distinction between certain affections. Some are more prone to commence in the testis, others in the epididymis.

In this lecture, too, the question of the relation of scrofula to tubercle is set aside, and the terms are used as they are commonly understood—to mean substantially the same thing.*

Acute inflammation may attack primarily either the epididymis or the body of the testicle. The former is far more often affected than the latter. In either case the disease is characterised by acute pain and tenderness, by swelling of the part affected, by congestion and œdema of the scrotum. With inflammation of the epididymis there frequently occurs effusion of fluid into the sac of the tunica vaginalis. Occasionally it happens that the testis and epididymis are both the seat of inflammation at one and the same time. Gonorrhœa is without doubt the most frequent cause of epididymitis, inflammation apparently travelling along the vas deferens to its origin at the back of the testis, whilst acute orchitis is perhaps most commonly due to an injury, a squeeze or blow for instance. In whatever way it may have originated, and whatever the part affected, acute inflammation usually subsides more or less quickly under suitable remedies, often leaving behind, however, some slight thickening and induration, especially of the epididymis.

Or the disease, instead of passing away readily and almost as rapidly as it had commenced, may lapse into a chronic condition; a fresh attack of inflammation having perhaps been caused by some act of imprudence during the subsidence of the first illness. The body of the testis is much more often and profoundly affected in the chronic than in the acute form of the disease. The organ slowly increases in size, forms a smooth, firm, heavy swelling, of an oval shape with flattened sides. The patient complains of dull aching pain; the testicle is tender when firm pressure is made upon it. Sometimes there takes place effusion into the tunica vaginalis, but not usually to a large amount. In time the pain becomes less, or even passes away altogether, but the testicle remains enlarged. After the lapse of weeks or months the swelling may entirely subside, and the organ may regain its normal size and condition. Or some slight cause may again light up the smouldering inflammation, pus may form, an abscess slowly make its way to the surface, and, the parts having become adherent, may discharge through an ulcerated opening in the integument. Chronic orchitis, however, is not always a sequel of acute inflammation of the testicle. Produced at first by some form of irritation, a slight contusion, for instance, or some disease of the urethra, most usually stricture, the inflammation from its commencement exhibits chronic characters. Of all the causes of chronic orchitis, perhaps none is so frequent as syphilis. In the syphilitic inflammation the body of the testicle is almost always affected. The disease occurs during either the secondary or tertiary period of venereal symptoms, most commonly during the latter, often, indeed, after so long an interval that it is with difficulty the patient can recall with any degree of certainty the history of the primary disorder, or even the fact of its having occurred.

Syphilitic disease of the testis is essentially a chronic inflammation; indeed, the symptoms and course of the disease are often typical of chronic orchitis. Slow swelling, sometimes not noticed at first because unaccompanied with pain or inconvenience, at other times giving rise to dull aching pain and tenderness, marks the first onset of the disorder. Gradual enlargement of the testis, bearing the same characters as those I have just described in the non-specific form of the disease; occasionally also slight effusion into the tunica vaginalis; in time, perhaps, the formation of adhesions between the testicle and its coverings; the slow formation of pus and its discharge through an opening in the scrotum, followed not rarely by the protrusion of a fungous mass through the ulcerated opening,—all these mark the progress of the disease. If we examine a syphilitic testicle in an early stage of the disease, we shall find precisely the same appearances as those which belong to the non-specific orchitis—namely, pale-yellow lymph forming an irregular mass probably at one or more spots in the body of the organ. The seat of this lymph will be found to be the connective tissue between the tubuli seminiferi. The tubules themselves are also often filled with newly formed cell-tissue, apparently from proliferation of their epithelium, secondary to the changes which are taking place outside them. Now much of the future of the disease depends upon the character of the lymph effused. In many cases it is capable of becoming organised, and a fibroid tissue is formed between the tubules. But in the majority of cases it is more or less what has been called cacoplastic lymph. In the worst cases it proceeds to rapid degeneration; a puriform substance is produced; actual suppuration is provoked; discharge takes place, with the formation, perhaps, of hernia testis, or at least of a fistula or sinus in the testicle. The worse the disease, the more advanced the cachexia, the more degenerate is the lymph. At times the pus formed is contained in a species of capsule, the fluid parts are absorbed, and a concrete mass remains behind. It is a matter of no small difficulty to decide between such circumscribed formations and the yellow tubercle. In the former case, however, the pus will be found to be contained within a distinct capsule, whilst the tubercle, though apparently as much, is really less defined, and is in contact with the surrounding substance of the testicle.* Unfortunately, if the inflammation continue, whichever direction the lymph may take, whether towards organisation and the formation of fibroid tissue, whether towards degeneration and the production of pus, in any case the testicle will probably be irretrievably spoiled. In the former case contraction of the newly formed tissue takes place, the seminiferous tubes are diminished in size by the pressure around them, atrophy of the whole organ is produced, and in time a totally useless testicle remains.

* System of Surgery, vol. i.; art. "Scrofula."

* Curling: Diseases of the Testis, third edition, p. 234.

We have already seen how in the latter case slow and certain destruction of the gland may occur.

Now let us turn to the scrofulous testicle. Here at once we meet with difficulty, owing to the vagueness of the term. Whereas one surgeon restricts its meaning to tubercular disease in either of its forms, another may include in it various chronic inflammations of a low type, whilst a third makes a distinction between scrofulous and tubercular disease of the organ. As in the name, so in the nature and characters of the disease we find the greatest difference of opinion. The yellow tubercle is disallowed by one author as tubercle; the very existence of the miliary tubercle is denied by another.* I shall, however, here describe the disease as it is commonly found to occur in either or in both forms. The yellow or crude tubercle is most frequently found; the disseminated tubercle far less often. Whichever form it assumes, the first deposit may take place in the epididymis or in the body of the testicle. This specimen† is an example of the former, and this‡ of the latter disease. In each case the tubercle is of the yellow or crude kind; in each case it forms a single circumscribed nodule. Here, again, is a specimen§ in which the body of the testis is affected, but in this case there are several small yellow masses. Whether the first formation of tubercle takes place in the epididymis or in the testis, it generally advances from one to the other—even gradually infiltrating, as in this case‖ (the testicle of a man who died of phthisis), the whole of the organ, the epididymis, and the vas deferens. The progress of the disease is usually from bad to worse. Commencing insidiously with slight swelling and little or no pain, it continues slowly to increase until the organ is totally disorganised. This may happen either from the general infiltration of the tubercle, or by the degeneration of the new formation and the production of pus, with a later formation of fistulous passages, or hernia testis. Here are two specimens of hernia of the testicle. The first¶ shows two large scrofulous testicles, containing a considerable quantity of yellow tubercle. A portion of the larger protrudes through a circular opening in the scrotum, and presents itself externally as a ragged fungous mass. Both of these testicles were removed during life. The second specimen** is similar in kind, but the enlargement of the organ is not so great. The diagnosis between the scrofulous testicle and that affected with chronic inflammation—for example, with syphilis—is not easy. The former is usually slower in its course, and the epididymis is more often affected than is the case in the latter. Concomitant signs may exist, too, in either case, and give the clue to the nature of the disease. Even after removal of the organ it is often most difficult to decide whether the yellow deposit found is tuberculous or merely the result of chronic non-tuberculous inflammation, because tubercle itself is not well defined. Differing from ordinary lymph, it is yet closely allied to it, and insensible gradations exist connecting the two. Hence it often happens that of the same specimen one man says, "Tubercle"; another, "No: lymph, the product of chronic inflammation." The seat of the formation or deposit was formerly much insisted upon as affording an important distinction between lymph and tubercle. The usual seat of lymph—the tissue which is primarily affected in inflammation—is the connective tissue between the tubes. It was formerly supposed that it was in the interior of the tubes themselves and their walls where the chief changes were found in the earlier stages of tubercle. But modern pathology has rendered even this distinction so untrustworthy and so uncertain that I cannot venture to lay much stress upon it. Tubercle in its purest form—if I may use such an expression—is found in the connective tissue external to the tubes;†† chronic inflammation, as already pointed out, may lead to considerable changes within the tubes. Where the testicle protrudes through the ulcerated scrotum, it is often impossible to make a correct diagnosis of the exact nature of the disease.

Supposing, then, you and your friend to be at issue on the nature of the substance in the testis in a particular instance—one calling it tubercle and the other lymph the product of inflammation,—you cannot settle the question simply by an examination, however minute and accurate, of its structure. You must first of all agree on what is to be understood by the word tubercle. So it is that we are in the habit of calling most of these, cases of scrofulous testis, including under that term a large number of cases of chronic inflammation of various kinds. You may do this if you please, provided you understand in what sense you employ the term, and are not misled by such an application of it. For it is a serious matter in the question of treatment to mistake a syphilitic for a scrofulous testicle, or the reverse; and perhaps to give mercury where not only none is required, but where it would be absolutely prejudicial.

* Rindfleisch: Pathological Histology, vol. ii., 190. New Syd. Soc., 1873.
† Series xxviii., 33. ‡ Ib., 22. § Ib., 38. ‖ Ib., 32.
¶ Ib., 50. ** Ib., 35.
†† Rindfleisch, loc. cit. Virchow: "Krankhaften Geschwülste," Band ii., s. 686.

ABSTRACT
OF A

Clinical Lecture
ON

PHTHISICAL LARYNGITIS.

Delivered in the Queen's Hospital, Birmingham,

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GENTLEMEN,—I purpose to offer you a brief description of phthisical laryngitis. I shall endeavour to lay before you in outline, in as few words as possible, an account of the clinical history and progress of this common, painful, fatal, and important malady. By phthisical laryngitis I mean that peculiar form of chronic inflammation of the structures of the larynx which is met with in a very large proportion of cases of ordinary chronic pulmonary consumption. From the earliest times this disorder has been recognised. Celsus mentions, as a result of exposure to bad weather, "tussis, destillatio, raucitas, in quibusdam etiam tabes oritur."* The general symptoms of serious laryngeal disease are always sufficiently evident, and when these were present in cases of consumption of the lungs, it was usual to infer that laryngeal phthisis existed as a complication; and, after death, decided evidences of grave laryngeal lesions were often found, more especially ulcerations of the mucous membrane and changes in the cartilages—conditions which have been carefully described by Rokitansky and other writers. But the laryngoscope, as has often been said, literally threw light upon these and other pathological processes in the throat: we have now become able exactly to observe, and carefully to watch, and so intelligently to treat, these local maladies; and it has become possible to mark the earliest visible alterations of the larynx in laryngeal phthisis, to recognise the disease in its first beginnings, to divide its progress into stages, and to apply remedies directly to the morbid tissues. Mackenzie, Niemeyer, Marcet, Cohen, Gibb, Aitken, and many others have written excellent descriptions of laryngeal phthisis—descriptions which agree in the main, while they conflict in not a few important particulars. To the authors named I desire cordially to express my indebtedness. But I shall follow the writings of none of them; I prefer rather to base my brief account upon my own clinical experience in private and hospital practice.

Concerning the pathology of phthisical laryngitis I have very little to say. Our ideas of the pathology of phthisis have recently undergone some important changes. Amid much contradiction, but as the fruit of much patient labour, very great advances—advances to my mind unsurpassed in importance by any which have been made in this generation in any department of the science of medicine—have been gained in our knowledge of phthisis and tuberculosis. "Virchow recommends the larynx as the very place to study true tuberculosis";† while Louis did not consider that tubercle was ever deposited in the tissues of the larynx;‡ and Mackenzie, describing the pathology of laryngeal phthisis, says, "tubercle appears to play a very secondary part, if

* Celsus, lib. ii., cap. 1.
† Niemeyer: Pract. Med., translated by Humphreys and Hackley
‡ Louis on Phthisis, quoted in Reynolds's System of Medicine.

any part at all."* I have seen every reason to believe that the local lesions in the larynx in phthisis are mainly, if not solely, inflammatory, and wholly unconnected with truly tubercular changes in the parts.

I do not think I have ever met with a case of laryngeal phthisis which was not attended, sooner or later, by pulmonary consumption. The pulmonary changes usually appear before those in the throat. But not unfrequently laryngeal phthisis becomes fully established before any lesions in the lungs can be appreciated, and in these cases the laryngoscope is of the greatest service in helping us to decide whether a given case of laryngitis, unattended by thoracic disease, is phthisical or not. Adults are much more liable to this disease than children, and men than women.

For some time past I have found it convenient to divide the laryngeal changes in this affection into four stages—viz., 1, the stage of anæmia; 2, that of tumefaction; 3, that of ulceration; and 4, that in which necrosis or caries of the cartilages may arise. The first three of these stages are almost always met with; the last is not nearly so constant in its occurrence. The earliest visible local change is anæmia—a very decided and general pallor of the mucous membrane of the larynx. Anyone accustomed to use the laryngoscope cannot fail at once to recognise this condition. Not unfrequently the upper parts of the throat, the soft palate and uvula more especially, present a similarly unhealthy paleness. When the signs of distinct anæmia are general this local bloodlessness loses its phthisical significance; but when we find vocal feebleness and laryngeal anæmia in a person whose blood seems tolerably healthy in quality and quantity, we must carefully look for other evidences of phthisis, and closely watch, and take every possible means to improve, the nutrition of the larynx. As the local disease progresses the laryngeal mucous membrane often becomes congested; the cords lose their clear, white, healthy lustre, and for a time it may be very difficult or quite impossible to distinguish the case from one of simple chronic laryngitis. But sooner or later the characteristic tumefaction of laryngeal phthisis appears, and there remains no further room for doubting the serious nature of the local malady. The swelling is usually most marked in the ary-epiglottic folds. In extreme cases these folds are often expanded into two large, tense, brawny-looking, pear-shaped tumours, with their larger ends meeting together in the middle line behind, while their smaller extremities are directed upwards and outwards towards the epiglottis. The epiglottis is generally similarly changed; it loses its leaf-like form, its edges become thick and rounded, and the whole organ presents the appearance of an irregularly globular tumour. Sometimes the epiglottis is more or less twisted and drawn to one side; sometimes the swelling of the ary-epiglottic folds is unilateral at first. These tumefied tissues seriously encroach upon the opening of the glottis, and they often completely hide the vocal cords from view. Even now the laryngeal mucous membrane looks paler than in health, although irregular patches of congestion and enlarged and tortuous vessels may frequently be observed. When the appearances of this stage of laryngeal phthisis have become established the case is sure to terminate fatally. Sooner or later, if the patient do not die from disease in other organs, the swollen laryngeal tissues become ulcerated. The ulcers are irregular in shape and distribution; there are usually more than one of them, they may occur in any part of the larynx, they tend to spread and run together, and their surfaces are always covered with a mixture of pus and mucus. The ulceration frequently implicates the vocal cords, and commonly occurs about the processus vocalis, at the junction of the middle and posterior two-thirds of the cord. Caries or necrosis of some of the cartilages, proceeding probably from perichondritis, is not unfrequently the last local lesion in laryngeal phthisis.

In all cases the voice is affected early; in nearly all it is sooner or later wholly extinguished. At first the vocal impairment may be slight; the voice may be weak and tend to become whispering, the result of feebleness of the muscles of the cords. Failure of the voice in speaking or reading aloud may be noticed, or those who sing may find it difficult or impossible to produce their higher notes. When congestion appears, the voice becomes husky, harsh, and hoarse. When there is much submucous tumefaction, the movements of the cords, and especially their approximation, are mechanically interfered with, and the voice is consequently still further impaired; when the tumefaction is considerable, and when it passes into widespread ulceration, all true laryngeal voice is usually lost.

There is, as a rule, no embarrassment of respiration at first. But when the second stage of the malady is decidedly established, the passage of air through the narrowed glottis becomes more and more difficult; there is often loud stridor, which in some cases is subject to alarming paroxysmal exacerbations, and in a few instances the laryngeal dyspnœa is so great that tracheotomy may be necessary to avert impending suffocation.

In most cases of laryngeal phthisis deglutition is at some time interfered with; in many instances difficulty in swallowing becomes the most prominent and most dangerous of all the symptoms. Judging from what I have seen of this condition, I am accustomed to say to my pupils, that in many cases of laryngeal phthisis the symptoms of organic stricture of the œsophagus may be closely simulated. So far as I have observed, there is never any difficulty in deglutition until the disease has at least reached its second stage. When the ary-epiglottic folds are largely swollen, they project backwards over the upper opening of the œsophagus, and offer a mechanical obstruction to the passage of food. In this stage, too, the swollen parts cannot be perfectly approximated so as to occlude the glottis and prevent the entrance of portions of food into the larynx; almost whenever swallowing is attempted a violent fit of coughing is induced, during which fluid food may be ejected through the nostrils. The passage of food over a tumid and tender epiglottis may be attended with pain. In all these cases swallowing may at any time become either simply painful or mechanically difficult.

Considering the decided nature of the laryngeal lesions, it is strange that in many cases there is so little local pain. There is nearly always a little unpleasant tickling in the throat as an early symptom. Patients feel as if there were something sticking in the windpipe—as a fly—and causing irritation, which they are prompted to endeavour to remove by violent hawking and coughing. When the stage of ulceration is reached, severe burning pain in the throat may be felt, which is propagated in various directions, but especially towards the ears. A considerable quantity of phlegm may be derived from the larynx; in the earlier stages of the disease, nothing but a little glairy mucus may be coughed up; when there is much congestion, a few streaks of blood occasionally appear; when there is ulceration, the sputa gradually become chiefly purulent, and the admixture of blood is more copious and more frequent.

Although we cannot hope to cure laryngeal phthisis when it has once become fairly established, we are able, nevertheless, to achieve a great deal of good in retarding the progress of the disease and in relieving the sufferings of its victims. In all cases of phthisical laryngitis, and in all cases of chronic laryngitis in which any phthisical symptoms are presented, we ought systematically and perseveringly to adopt all the general hygienic and medicinal measures which experience has shown to be beneficial in the treatment of consumption. It is not my purpose to discuss these general therapeutic procedures. In phthisical anæmia of the larynx, we ought to aim at improving the nutrition of the affected organ. Excessive use of the voice and exposure to cold should be carefully avoided. Iron is needed internally. I am disposed to place great reliance on the efficacy of the application, by means of a suitable brush, guided by the aid of the laryngeal mirror, of stimulating solutions to the laryngeal mucous membrane. We may use solutions of chloride of zinc, sulphate of copper, or nitrate of silver; all of which have a stimulant and astringent local action. I can recommend the employment of medicated lozenges, especially some of those of the Pharmacopœia of the Hospital for Diseases of the Throat, in Golden-square. Theoretically, the action of lozenges on the larynx may be doubted; but I am content, in therapeutics, to accept empirical facts, and not value them the less because I cannot explain and understand them. I feel tolerably sure I have often seen great benefit result from the judicious use of suitably prepared lozenges. In the earliest stages of laryngeal phthisis the trochiscus acidi benzoici, an excellent "voice lozenge," will be found useful. When the larynx is congested, and all through the course of this disease, counter-

* Mackenzie: Reynolds's System of Medicine.

irritation over the front of the neck is occasionally indicated. We may use iodine paint, croton liniment, antimonial ointment, or sinapisms. Sometimes a small blister, applied just above the sternal notch, is of service. Warm linseed or bread poultices, or pads of cotton wool wrung out of hot water and covered with oiled silk externally, are soothing and grateful when laid over the front of the throat. When the mucous membrane is swollen or ulcerated, we ought regularly to brush it twice or thrice a week with a solution of nitrate of silver, of the strength of one drachm of the salt to a fluid ounce of water. In this remedy, so used, I have had abundant ground for confidence; and I have found this kind of local treatment especially reliable in relieving or removing the difficulty of deglutition which is often such a prominent and painful symptom in laryngeal phthisis. Any measure which can keep down coughing may afford much real benefit in this disease. Prompted by the feeling of laryngeal irritation, patients are prone to make energetic efforts at clearing the throat. While hawking and coughing may remove accumulating mucus and pus, such actions tend to perpetuate and increase the laryngeal inflammatory changes. In a word, we ought to rest the larynx as much as possible. It is astonishing how much the act of coughing can be brought under the control of the will. We ought to impress upon our patients the importance of restraining and refraining from coughing so far as they are able to do so. Neither ought they to talk much or loudly. For the relief of coughing we may give opium and its preparations pretty freely, especially when there is coexisting lung disease. Sedative lozenges and inhalations may be useful adjuncts. In phthisical laryngitis we may use various inhalations; of these, those that are astringent and sedative are the most suitable. For steam inhalations we may employ Mackenzie's inhaler; while for atomised inhalations, Siegle's apparatus, or Dr. Andrew Clark's handball spray-producer, will be found very convenient.

ON

"THE LEAST SACRIFICE OF PARTS" AS A LEADING PRINCIPLE OF SURGICAL PRACTICE.

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(*Continued from p. 119.*)

THE VALUE OF THE PRINCIPLE ILLUSTRATED BY THE SURGERY OF THE JOINTS.

I WILL now pass on to apply the principle to cases of disease of the joints, and to illustrate its value by the quotations of cases; for I feel more convinced year by year that disorganised joints are more amenable to direct local surgical treatment than is generally supposed, and that free incisions into joints and the removal of necrosed bone from joints are both excellent and successful operations. Both these measures are far less severe than resection in the bulk of cases, and far less serious than amputation; and in a number of instances they are also most successful. To say that these minor measures in all cases are likely to supersede the more severe would clearly be wrong; although I feel convinced that I am not saying more than what is true when I express my belief that a large number of joints would be saved and useful limbs retained were the practice I am now about to illustrate more freely followed. I will now quote a few cases of suppuration into joints treated by incision to illustrate my point.

CASE 11. *Pulpy disease of ankle-joint; recovery with good movement after free incision into joint.*—Tom W——, aged four, came under my care at Guy's Hospital on Jan. 30th, 1865, with a disease of the ankle-joint. It was on the right side, and had existed for seven months, having come on after an injury, with pain and swelling. When seen, the joint was clearly much enlarged, the parts around the malleoli &c. being doughy and thickened. There was pain in the part and daily flushing with heat, especially at night. Fomentations were ordered, with tonics, and by Feb. 20th all heat had disappeared, with all pain and indications of inflammation. The joint was consequently strapped up. The child was then, contrary to orders, allowed to use his limb, and as a consequence a relapse took place. The symptoms became as bad as—indeed, worse than—ever, and suppuration followed, an abscess opening on the outer side of the joint on May 15th. On May 19th another formed about the inner malleolus, and it was clear that the joint was thoroughly opened. A free incision was made into the joint about the inner malleolus, and its contents allowed to escape without hindrance. Water dressing was applied. From this time everything went on favourably. By June 10th the abscess and the incision over the external part of the joint had healed, and all pain had ceased. By September things looked as if they were about to consolidate. On Oct. 5th there was another relapse, and another abscess formed, and severe joint symptoms with constitutional disturbance made their appearance; indeed, it appeared as if an abscess had burst into the joint from the breaking down of some of the pulpy disease in the synovial membrane. The symptoms, however, gradually disappeared, and by Nov. 27th all their severity had gone. From this date everything went on favourably, suppuration ceased, and all thickening of the synovial membrane gradually disappeared. By Feb. 19th, 1866, all the abscesses had healed and the sinuses were closed, and by April the joint reassumed its natural aspect, all thickening of the soft parts having subsided. Strapping was again employed to hasten the absorption of the inflammatory products, and by April 9th the case was reported as well, with, what was hardly to be expected, a movable joint. By December, 1866, the joint was quite sound, perfect movement existing, the remains of the cicatrices and some weakness of the joint alone remaining to testify to the severity and nature of the disease. On December 7th, 1868, this boy called on me, and the joint was still sound and useful, no traces of disease beyond cicatrices remaining. The astragalus moved as smoothly as possible between the malleoli. He is still well.

CASE 12. *Pulpy disease of ankle joint, treated by free incisions; suppuration and recovery.*—William R——, aged nine, was brought to me at Guy's Hospital on July 4th, 1864, with a disease of his right ankle of two years' duration. It had appeared after a blow, with pain and swelling, and at uncertain intervals these symptoms had continued ever since. When he came under observation the synovial membrane projected round the malleoli and was much thickened, and appeared in parts to be breaking down; any movement of the foot caused pain, and the astragalus did not move smoothly in its socket. A splint was applied and tonics given. For a time the symptoms improved with the child's health, and it was hoped that suppuration would not take place. In March of the following year, however, two abscesses formed, one on each side of the joint, and it was clear by the passage of a probe that the joint was opened. A free incision was then made on each side, laying the joint open freely, and a splint was kept on. In six months the wound had healed, and the parts appeared to have become consolidated. In another three some movement in the joint appeared. In July, 1866, when last seen, the boy could walk well without pain. The movements of the joint were complete. The boy, however, required some extra support for his ankle, but had a good foot.

CASE 13. *Pulpy disease of the left ankle-joint; suppuration; recovery with a movable joint.*—Cornelius M——, aged three years, was brought to me at Guy's Hospital on Dec. 14th, 1865, for disease of his left ankle. It had come on after a fall, received some months previously, with pain and swelling, the joint being at times hot and painful. When first seen by me the articulation was clearly swollen from inflammatory infiltration of the synovial membrane. The whole part had a soft and pulpy feel, and the margins of bone were all covered in. There was no bulging of the synovial membrane from effusion, and the articulation moved smoothly. Fomentations with strips of wet rag were ordered to be kept on the joint, and the horizontal position was maintained; tonics were also given. By the 30th of January the symptoms had improved; but on February 26th they had again become severe, suppuration threatening. On March 12th an abscess was opened by a free incision in front of the inner malleolus, which was

clearly connected with the joint; consequently a splint was applied. By the 25th of June all swelling had nearly subsided, and all heat had gone. Pressure with strapping was applied; and on Sept. 3rd (six months after the incision) the child was declared to be cured, with a good and movable joint.

CASE 14. *Pulpy disease of the synovial membrane of the ankle joint; free incisions; recovery with a good joint.*—Alfred T——, aged five years and a half, came under my care at Guy's on Jan. 1st, 1866, for disease of the right ankle-joint of three years' standing. It had appeared after a fall, and had commenced with pain and swelling. When seen, the whole ankle was much swollen, soft, and pulpy to the touch. It was hot and painful, although some movement was allowed. Fomentations were ordered, and steel wine given with good food. The boy was directed to be kept in a bed. On Jan. 29th an abscess appeared on the inner side, which was opened by a free incision, the pus clearly coming from the joint, for it could be pressed out. Water dressing was applied. The case went on satisfactorily after this for a time, but by June 14th a second abscess appeared on the outside from the breaking up of the inflammatory effusion. This was treated also by a free incision, and water dressing applied. At this time the inner wound had quite healed. In three months the outer incision had also cicatrised, and the swelling about the joint had disappeared. Some movement of the articulation also existed. In August, 1868, nearly two years after this date, the child was brought to me, when the movements of the ankle-joint were smooth and perfect, the only marks of the old disease being the cicatrices and the weakness of the joint.

CASE 15. *Synovitis and disorganisation of ankle-joint, treated by free incision; recovery with movement.*—Eliza M——, aged two years, was brought to me at Guy's on Feb. 25th, 1864, for disease of the right ankle. It had existed for six months, and had commenced with pain and swelling. When seen the joint was clearly much diseased, although the cartilages were apparently perfect. There was great thickening of the synovial membrane all round the malleoli and the joint, and the parts were hot. Fomentations were ordered with tonics. On March 1st all the symptoms were worse, and suppuration of the joint was threatening. On March 31st the articulation was laid open on its inner side. The whole joint having apparently broken down, a splint was applied. Much relief followed the laying open of the joint, and from that time things began to mend. On May 10th there was a little discharge, and by July the wounds had healed. The splint had been kept on during this period. By July 30th the splint was removed, and on Sept. 10th some movement in the joint was visible. In December the movements were much more perfect, and on April 10th, 1865, when the mother again brought the child, I was surprised to find that the foot moved freely and smoothly between the malleoli and without pain. The joint was weak, and required some support, but it was sound.

CASE 16. *Disease of the knee-joint, ending in suppuration, treated by free incision; recovery with movable joint.*—William S——, aged thirteen, came under my care in February, 1865, for severe disease of the right knee-joint. It had existed for three years, and had appeared with pain of a dull aching character in the part for at least six months before any visible enlargement of the joint had appeared. The swelling gradually increased after that time, and the pain continued. He had been under care for some months at a metropolitan hospital. When I saw the boy the knee was much enlarged from a thickening of the synovial membrane over expanded epiphyses. There was increased heat in the joint, and pain on pressure. There was little movement in the articulation, but what existed was smooth. An abscess was clearly forming over the inner condyle of the femur. A splint was applied to fix the joint, fomentations ordered to the abscess, and tonics given. On March 1st the abscess was opened freely, several ounces of unhealthy pus and synovial fluid making their escape. The wound healed kindly, and the swelling of the soft parts over the bone gradually subsided, and on December 15th it was noticed that all evidence of disease of the synovial membrane had disappeared. The splint was, however, kept on, as it was thought unlikely that any other result than a stiff joint could possibly result. On September 3rd, 1866, the splint was removed, and, to the satisfaction of all, the joint was found to have recovered, and to be partially movable. By December 17th the mobility of the joint had much increased, and by January 3rd, 1867, he was pronounced perfectly cured. He was seen again on March 24th, 1868, with the parts quite well, the expanded epiphyses having greatly contracted. On May 2nd he hurt the joint by a blow, and some slight indications of mischief reappeared, but these subsided in a few days under rest and fomentations, and in three weeks he was again well. In August, 1868, the joint was still sound.

CASE 17. *Disorganisation of elbow-joint after an injury, treated by free incisions; recovery with movement.*—Walter L——, aged nine, came under my care at Guy's Hospital on May 13th, 1867, for great enlargement of his right elbow-joint, following an injury received three months previously. Swelling, with constitutional symptoms of a severe nature, followed the accident, and since then the enlargement has been gradually increasing. When I saw the boy, the elbow-joint formed one large abscess. His appearance was one indicative of suffering. He refused to come into the hospital. Two free incisions were consequently made into the joint, one on either side, and an anterior angular splint applied. Pus freely escaped, and free crepitation was felt on moving the joint. Tonics were prescribed, with good living, the boy being in tolerably comfortable circumstances. In one week the condition of the part had much improved, the swelling had subsided, and the sinuses still discharged. He then consented to be admitted into Guy's. All the symptoms, however, rapidly improved, the swelling gradually disappeared, and the wounds healed. By October 10th, there was only one sinus open on the inner side, and all pain and swelling had vanished. On examination there was found to be some movement in the joint, and three months subsequently this had much increased.

CASE 18. *Disease of shoulder-joint; suppuration; treatment by free incisions; recovery with a movable joint.*—Henry F——, aged sixteen months, was brought to me at Guy's Hospital on October 12th, 1863, for acute suppuration of the right shoulder-joint of five weeks' standing. It had appeared without any known cause, with swelling, severe local pain, and constitutional disturbance. Suppuration made its appearance the day before he came under my notice, and a large abscess was freely opened in front of the joint below the insertion of the pectoral muscle. A probe readily passed through the wound into the joint. The joint was much thickened, and any attempt to move it caused pain. The child's face clearly indicated the severity of the symptoms. Fomentations were ordered, with tonic medicine; and by Nov. 2nd, or in three weeks, the abscess had almost ceased to discharge. By Nov. 9th the wound had closed, and the shoulder was clearly becoming much smaller. On Nov. 16th some movement in the joint was detected, and in six months a perfect recovery was noted. The movement was good, although some amount of crepitation existed.

CASE 19. *Enormous abscess involving the shoulder-joint; free incision; recovery with movable articulation.*—Eliza W——, aged five, was brought to me at Guy's Hospital on Dec. 18th, 1862, for an enormous abscess completely surrounding the left shoulder-joint. It had been coming on for one month after an injury, and had been attended with severe constitutional disturbance. A free incision was made into the abscess in front of the joint, and a quantity of pus let out; immediate and permanent relief followed. For three months the sinus discharged pus, and the joint appeared to be diseased, for any movement of the articulation caused pain, and was attended with crepitation as of bare bone. In another three months, however, all these symptoms had disappeared, and the child appeared before me with a good arm and a movable joint.

In this case the suppuration clearly came from beneath the deltoid muscle, and was apparently within the joint. The result of the case, however, throws some doubt upon this point, for I never saw so complete a recovery of a shoulder-joint articulation after suppuration as existed in this instance.

The nine cases I have just quoted were all examples of suppuration of a joint from synovial disease. In all incisions were freely made as soon as good evidence existed of suppuration, and in all a good result followed, the disease not only being arrested in every case, but a movable joint being saved to the patient.

The disease, however, in each occurred in children; and it is in such subjects that we meet with the most perfect

illustrations of the cure of disease by natural processes. Nevertheless they serve well to illustrate the practice I am here inculcating.

In the next series of cases the same treatment was applied, although with a different result, anchylosis of the joint following in all.

CASE 20. *Disease of the hip joint; suppuration and anchylosis; treatment by free incision.*—Dennis M——, aged four, was brought to me at Guy's Hospital on March 19th, 1866, for limping with his right leg. It had been observed for three weeks, and had come on without any history of a fall or injury. The child had complained also of pain in the part. On examination the pelvis was tilted to the left side, giving the appearance of elongation to the affected limb of about an inch. There was no enlargement or thickening about the joint, no increase of heat, or pain on gentle manipulation. The glands in the groin were healthy. Firm pressure, however, upon the trochanter gave pain, and any attempt to move the limb excited spasm of the muscles. The parents were directed to keep the child off its legs, to bathe the part with warm water, and to give tonics. By the 8th of April the symptoms had improved; there was less pain and less spasm of the muscles. By the 16th they were still better. The child then disappeared from view, the parents thinking he would soon be well. He soon began to use the limb. On Oct. 15th he reappeared, with evident thickening about the joint, particularly about the neck of the bone. It was more painful on pressure. The symptoms had been worse for three weeks. On Dec. 3rd a large abscess showed itself behind the trochanter, which was freely opened, the finger passing through the abscess down to the joint. A splint was applied. On Jan. 6th the abscess was discharging, but the child seemed well in his general health. By the 3rd of May the sinus had closed, and the joint was clearly becoming anchylosed. By the 20th of October it was firmly fixed. On Dec. 10th my report states that the joint was quite stiff and immovable, and free from all pain. The child subsequently went about freely with a stiff joint.

CASE 21. *Suppuration of the knee-joint after miscarriage; free incisions into the joint; recovery with a stiff limb.*—Eliza K——, aged thirty-five, a married woman, came under my care on October 7th, 1864, with a suppurating knee-joint. It had been coming on for six weeks, and had followed, in three days, upon a miscarriage at the second month. The symptoms of inflammation of the joint had been very acute, and the constitutional disturbance severe. When I saw the patient the joint was much swollen, hot, and painful, and any attempt at movement caused great distress, and severe constitutional disturbance existed. The patient's powers were very feeble. On October 8th a splint was applied, and free incisions made into the joint, one on either side of the patella. Pus and broken-up tissue escaped. Water dressing was applied. From this moment things began to mend; fever and other symptoms disappeared. The woman took food freely and pain gradually subsided. Anchylosis also went on rapidly. On December 9th, on removing the splint, the joint appeared to be fixed. The wounds had healed, and all constitutional symptoms had disappeared. On Jan. 10th the woman walked out of the hospital, wearing a good leathern splint, with a firmly anchylosed joint. In January, 1868, she was still well, wearing the splint. She could walk about freely, without pain or inconvenience.

CASE 22. *Acute suppuration of the knee-joint, following a puncture into the articulation; the subject of the pulpy disease of the synovial membranes; free incisions into the joint; anchylosis.* (Reported by Dr. P. H. Pye-Smith.) — Ellen C——, aged six, a fair but healthy-looking child, was admitted into Guy's Hospital, under Mr. Bryant's care, on December 10th, 1861, for some disease of her right knee. It appeared that the disease had commenced about twelve months previously by swelling of the joint, this swelling being accompanied with pain and heat in the part; it steadily progressed for nine months, when she applied (some three months before admission) to a hospital, where an opening was made into the joint on its inner side to let out what was believed to be fluid, but nothing escaped, and as a result acute inflammation of the joint followed, with suppuration. The child's parents, not wishing the child to remain longer in that institution, removed her, and brought her to Guy's. When admitted the joint was much enlarged, and was suppurating profusely. The slightest movement caused intense pain. The child looked anxious and worn, and had little power. Mr. Bryant ordered a back splint to be applied, and water-dressing to the knee, quinine and wine being given internally. In a week's time, as the opening into the joint was small and suppuration profuse, Mr. Bryant made a free incision into the joint on the outside of the patella, giving exit to pus and broken-up tissue, and from this time everything went on favourably; the discharge gradually diminished, surgical fever disappeared, and the powers of the patient improved. On April 12th, 1862, or four months after admission, the joint was firmly anchylosed in a straight position, all suppuration had ceased, and the child's health was re-established. A splint was kept on the back of the knee for some months subsequently as a precautionary measure, and a good leg was secured. The child left the hospital on Aug. 10th with a useful limb, and in good health. She was heard of one year subsequently, and had free use of her limb.

CASE 23. *Abscess in shoulder-joint; recovery with anchylosis.*—Walter D——, aged four, came under my care at Guy's Hospital on Jan. 28th, 1866, for what appeared to be an abscess around the left shoulder-joint. It had been coming on gradually without any assignable cause, with pain and swelling, the former at times having been very severe. When he came under my care a large abscess existed, surrounding the whole shoulder. No movement of the limb could be allowed, and any attempt gave severe pain. It was opened freely in front where it was pointing below the tendon of the pectoral muscle, and many ounces of pus let out. In a few days another opening was naturally made behind the joint. The bone about the upper third of the arm and about the joint was felt to be greatly thickened. On March 21st things had much improved. There was still some discharge from the sinuses about the joint, but much of the thickening had gone down. It was clear also that the head of the bone was becoming rapidly fixed to the scapula. On June 5th all the sinuses had healed, and in August the head of the bone had become completely anchylosed to the glenoid cavity.

CASE 24. *Suppuration of elbow-joint after injury; excision contemplated; anchylosis.*—Alfred T——, aged nine, came to me at Guy's Hospital on May 19th, 1862, with suppuration of the right elbow-joint. The disease had been set up in the joint some months previously by a blow; an abscess rapidly formed in the part, accompanied with great pain and severe constitutional disturbance. When I saw the lad the joint was much swollen, and several sinuses existed discharging freely. Any attempt at movement caused pain. The sinuses passed directly into the joint. A splint was applied, and tonics, as quinine, given. On June 1st the suppuration was profuse, and on July 10th the same report was recorded. The boy was ordered to come into Guy's to have excision performed, but this was refused; consequently, a free incision was made into the joint. In another month all the symptoms began to improve; the swelling of the joint began to subside, and the discharge to lessen. By October 20th the report states that the boy was convalescing, and in January, 1863, the arm had become stiff and good anchylosis had taken place. The joint was fixed at a right angle.

I might quote other cases to illustrate the value of the practice I am now advocating, particularly of suppuration of the smaller joints; but I think I have done enough to prove that it is of use in a large number of examples of disease of the joint ending in suppuration, more particularly of the synovial membrane, and that, by the adoption of such a practice, a mobile joint may be hoped for with some confidence, even after suppuration. I trust I have also done something to show the value of a correct diagnosis as to the seat of the disease—a point which is to be made out only by a careful consideration of the clinical history of the case—before a plan of treatment is adopted; and that I have strengthened somewhat the hands of the surgeon in aiding natural processes in the cure of disease. In doing this I feel I am only building upon the suggestions made by Mr. Gay in the *Medical Times and Gazette*, vol. xxiv., p. 546 (Lond. Med. Soc., November 22nd, 1851); and if I have added to the value of his suggestions anything of my own, it has been from the experience I have acquired as to the great importance of the plan of treatment he there inculcated.

These observations were written in May, 1869, in a paper I published "On the Treatment of Suppurating Joints by

Free Incision" in one of the journals, and I may add that subsequent experience has but confirmed me in the impression I had then formed. A free cut into a suppurating or disorganised joint, whether associated or not with bone disease, is rarely followed by any other than a good result. When the suppurating process is due to synovial disease, a recovery without further surgical interference may be looked for. When due to local necrosis the incision helps nature towards the recovery of the cases by expediting the process of exfoliation, and the subsequent removal of the bone by either natural processes or some surgical proceeding. And in still more severe cases the incision gives relief, and in no way tends towards inducing any increase in the mischief.

(To be continued.)

ON JABORANDI.

BY SYDNEY RINGER, M.D.; AND ALFRED P. GOULD, M.B., B.S.,
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THIS active and interesting drug, long in use in South America, was lately brought from Pernambuco to Paris by Dr. Continho. Dr. Gubler and M. Rabuteau confirm Dr. Continho's statement concerning its powerful diaphoretic and sialagogue properties. The dose for an adult is sixty to ninety grains, infused in boiling water. Dr. Continho recommended that the patient should drink the infusion with the suspended leaves, and then go to bed and cover himself with warm clothing. In about ten minutes the face, ears, and neck become deeply flushed; then soon drops of perspiration break out over the body, and at the same time the mouth waters; in a short space the perspiration rapidly increases, the sweat running down the body and soaking the clothes, whilst the salivation becomes profuse, running from the mouth sometimes in an almost continuous stream. In three of our cases the saliva amounted to an imperial pint, 22 oz., and 27 oz. respectively. The sweating and salivation continue from two to four or five hours, and simultaneously decline. Dr. Gubler has shown that the drug increases the bronchial secretion, and he further asserts that it sometimes produces diarrhœa. In a communication concerning the action of this medicine on some lads between the ages of eight and twelve lately published in the *Practitioner*, we confirmed these statements, with the exception of that relating to diarrhœa, and drew attention to the influence of this drug on the temperature, pulse, brain, &c. During the sweating we found that the temperature fell about one degree, the reduction persisting for the rest of the day; and that the lowest temperature was reached about an hour and a half after the administration of the medicine. In one case the fall began immediately, in another case in forty minutes, and in another instance in eighty minutes. In each experiment the pulse became considerably quicker, the increase varying from forty to fifty beats, the beats being quickest in from twenty-five to eighty minutes after the dose. The quickened pulse continued more than four hours. In one lad with intermittent pulse the medicine entirely removed this irregularity. The drug often produced nausea or sickness, which occurred two or three hours after taking it; it also occasioned considerable drowsiness, the lads falling asleep during the observations. The flushing of the face was noticed only when sweating occurred; and in a short time the flushing was succeeded by marked pallor, accompanied by some prostration. We tried to show that probably the fall of temperature was due to the perspiration and to increased radiation of heat from an increased quantity of blood flowing to the skin.

Recently M. Albert Robin has published the results of his investigations. He points out that, in addition to the sweating and salivation, the lachrymal and nasal secretions are increased; and asserts that before and during the sweating the temperature rises more than from 1° to 2° F., and then becomes normal; and that after the sweating the temperature falls more than from 1° to 2° F., and the depression lasts for a day or two. Sphygmographic tracings taken at different stages of the experiment proved that during sweating jaborandi produces very notable diminution of vascular tension. After the cessation of the sweating the pulse was much lowered.

We have recently made thirty-seven careful observations: twenty on adults, whose ages varied from twenty to forty-five; and seventeen on children, between three and ten years of age. To the adults we gave sixty grains; to the children thirty, and sometimes sixty. These investigations have led to the detection of several new and interesting effects of jaborandi. They lead us to conclude that some of M. Robin's statements are inaccurate. They show that children are very little affected by this drug. We administered generally thirty, sometimes sixty grains, giving both the solution and the dregs; and yet, strange to say, this dose often failed to produce any effect. In two cases only was the sweating abundant; in eight it was slight—in most, very slight, making the skin only a little moist; and in seven cases it excited no perspiration. Salivation was generally absent, and never more than to make the mouth rather moister than usual. There was very little flushing of the face, and this occurred only when perspiration was induced. The pulse was but slightly increased in frequency, from ten to sixteen beats, and this occurred only when the remedy acted on the skin. When the pulse was quick (and several of these children were convalescent and weak), we noticed that the pulse was still less influenced, and sometimes even fell. In our earlier observations on older children, where the effects were well marked, the pulse was much more quickened. When the skin was rendered moist, the temperature generally fell, the fall varying from 0·6° to 2° F. In eight of these cases it is noted that the child vomited, usually two hours after the administration of the medicine, but sometimes sooner. Occasionally the vomiting was repeated three times. When the vomiting was long delayed none of the dregs of the medicine were rejected. Many of the children were sleepy during the stage of depression. In no instance were the bowels affected, nor did the medicine excite any cough. To sum up: in many cases the children were not at all affected in their rest; the symptoms were very slight, most strikingly so when compared with the marked effects of jaborandi on adults.

In the twenty observations made on eighteen adults, the perspiration in every case but two was most profuse, and in these exceptional instances it was free. It began in about ten minutes, and in one instance only was delayed for an hour. Salivation was absent in two cases only; in three cases it was slight; in the rest profuse, amounting in one experiment to 27 oz. In one case only the pulse was unaffected, though there was marked perspiration. In the rest the pulse was quickened from 12 to 40 beats, the average being 20 beats per minute; the average increased frequency lasting two hours and a half.

The temperature was taken in nine cases, three in the axilla, the rest under the tongue. In every instance the temperature fell during the sweating, the fall varying from 0·4° to 1·4°, the average being 0·9°, and lasting from one hour and a quarter to four hours and a half, and then becoming normal; that is, the temperature reached the point observed before the medicine was given. This was administered between 9 and 10 A.M. The average duration of the fall was three hours and a quarter. In one instance only did the temperature rise, and then only 0·4°, the rise lasting a very short time. On this point our observations are opposed to those of M. Robin, who states that the temperature rises at first, and then remains depressed two or more days. This statement being quite at variance with our observations (for we have said that in a few hours the temperature recovered itself), we noted the temperature in three men every three hours for three days before the administration of the drug, every hour during the action of the medicine, and every two hours for two days after the medicine. We found that in a few hours the temperature returned to the point noted before the drug was given, and on the two following days was the same as on the two days previous to the experiment. In one case only the flush of the face and neck was absent, and in every case save two the flush was followed by pallor and more or less depression or even prostration. In half the cases we noticed slight cough due

to increased bronchial secretion, but this was always slight. In no instance did the medicine relax the bowels, so that its action on the intestinal mucous membrane must be slight. In one-half the cases the patients became decidedly sleepy, this occurring during the pallor, one, two, or three hours after the administration of the drug. A sensation of sickness, and sometimes decided nausea, occurred in two-thirds of the cases. In several cases the sight was decidedly affected. Mr. Martindale first drew our attention to this fact. He took, experimentally, a free dose of the medicine, and we saw him an hour and a half afterwards, when he said everything at a little distance looked hazy. On testing his sight we found that he could read moderate-sized type at about a foot distance, but at two feet the type became indistinct. This led us to investigate the effect of jaborandi in this respect in other persons. In three other cases, after the internal administration, the sight became decidedly affected; but the size of the pupil was unaltered. Mr. Martindale prepared for us an extract dissolved in glycerine, which we introduced into one eye of thirty-one persons. In nineteen cases the pupil became decidedly contracted, the amount of contraction varying, in some being slight, in others reduced by one-third, in two instances to one-half. We noticed that the pupil acted sluggishly in eleven cases. In a few hours the contracted pupil regained its natural size; but in one case the contraction was noticed twenty hours after the application. M. Robin finds that the tears and the nasal secretion are increased; but in four only of our cases were the lachrymal and nasal secretions increased sufficiently to attract our attention or that of the person experimented on. In eleven cases complaint was made of pain over the pubes, and in some instances this was severe, and was generally accompanied by a strong desire to pass water, which afforded relief. A good deal of trembling, especially of the upper extremities, followed in two instances after the administration. This was the case with Mr. Martindale, which did not appear to be due to nervousness. One man complained of much throbbing of the head the day following the experiment. Many patients complained of feeling alternately hot and cold, or chilly.

It will be seen that our later observations prove a marked antagonism between jaborandi and belladonna. Belladonna checks the secretion from the skin, the salivary glands, the mucous membrane of the nose, bronchial tubes, stomach, and intestines, and dilates the pupil and contracts the arterioles; jaborandi, on the other hand, increases enormously the perspiration and saliva, and, in a much less degree, the secretion from the mucous membrane of the nose, the bronchial tubes, and the stomach and intestines. Robin asserts, moreover, that it lowers arterial tension, probably by paralysing the vaso-motor nerves, and thus causing dilatation of the arterioles. Belladonna excites delirium, whilst jaborandi often produces sleep. This antagonism was well displayed in four instances. On three occasions, to three different men, we administered sixty grains of jaborandi, and when the perspiration and salivation were profuse we injected subcutaneously $\frac{1}{100}$ of a grain of atropia. In five minutes the perspiration and salivation were considerably diminished, and in from ten to twelve minutes the skin was preternaturally dry and the salivation was checked, but in one case continued a little after the cessation of the perspiration. It curiously happened that a lad was admitted into University College Hospital poisoned by atropia. He had taken one grain of the alkaloid five hours before treatment. His tongue and mouth were quite dry. A quarter of an hour after taking thirty grains of jaborandi his mouth became much less dry, and in an hour he was sweating freely and his mouth was naturally moist.

Belladonna, it is well known, arrests the secretion of milk, and we were anxious to ascertain whether jaborandi was antagonistic to belladonna in respect to its influence on this secretion. We administered thirty grains of jaborandi to a woman thirty-eight years old, confined of her ninth child four months previously. During suckling she had very little milk, and the quantity had become much less of late. We gave her the medicine at 10 A.M. She had suckled her child seven hours before. In ten minutes the drug produced its usual symptoms; in half an hour her breasts, which previously were flaccid, became tumid and distended, and on pressure yielded considerably more milk. In forty minutes the increase was still more marked, jetting forth in four or five streams. In eighty minutes the milk was less abundant, though considerably more so than before the experiment. The woman herself noticed the decided increase of her milk. To another woman, aged twenty-five, whose child is thirteen months old, we gave two doses of thirty grains, as the first had no effect. She emptied her left breast every ten minutes by pressure, and each of the three first emptyings yielded 40 minims. As soon as perspiration and salivation became free the quantity rose to 80 minims. The next time yielded 100 minims, the following 155 minims, the next time 80 minims. The salivation and perspiration at this time ceased. The next observation yielded 125 minims, the next 87 minims, the next 70 minims, and the last 40 minims. This woman, whose case is not included in those given before, complained of severe pain over the pubes, with desire to urinate, the pain immediately ceasing after micturition.

In some of their effects, however, jaborandi and belladonna agree. Thus, both flush the face and quicken the pulse; and both affect children much less than adults. Belladonna quickens the pulse by its paralysing influence on the pneumogastric, and possibly by stimulating the sympathetic nerves. We have no evidence that jaborandi paralyses the pneumogastric, or stimulates the sympathetics supplying the heart, but M. Robin has shown that it lessens arterial tension, probably by dilating the arterioles; and it is well known that dilating the arterioles, and thereby allowing the blood to pass more quickly from the arteries to the veins, quickens the heart-beats. Hence it is very probable that the quickening of the pulse by jaborandi is due to its influence on the arterioles; and thus, instead of affording an instance of similarity of action between these two drugs, affords another example of their antagonism, for belladonna contracts the arterioles. While referring to the relations of these two drugs, we may point out that both sometimes affect the bladder. Jaborandi, as we have seen, causes pain over the pubes, with desire to pass water, the pain subsiding when the bladder is emptied. These facts render it probable that jaborandi causes contraction of the bladder, for it does not augment the quantity of the secretion.

Jaborandi probably paralyses the sympathetic nerve, the effect being shown by the deep flushing of the face. M. Robin ascribes its effects to its influence on the sympathetic. But there are various reasons to doubt this conclusion. It is improbable that mere increase of blood could cause so great an increase of sweat and saliva. Belladonna flushes the face, but completely arrests the sweat. Again, it has been experimentally shown that belladonna will check the secretion from the submaxillary gland, although by irritation of the chorda tympani nerves the bloodvessels supplying the gland are dilated and full. It is true the flushing from jaborandi immediately precedes the outbreak of perspiration, but soon the flush declines, and is succeeded by marked pallor, yet the perspiration continues for hours, being often even more abundant than during the flush. To test whether the effects of jaborandi were off by repetition, we administered sixty grains to a man on three consecutive days, and the symptoms were as marked on the third as on the first day. On each day, in a few hours, the temperature recovered from the depression, rising to the height observed before the medicine was given. We should have continued this investigation some days longer, but the man appealingly protested that we were giving him more than his fair share of experimentation. In two other cases we gave sixty grains on two consecutive days, and the effects were as marked on the second as on the first. In one of these cases the temperature was observed, and on both days the temperature in a few hours recovered from its depression. These cases strikingly show the erroneousness of M. Robin's assertion that jaborandi causes a depression on the day following. On the other hand, we found the effects soon ceased in children, and sometimes the second dose failed to excite perspiration.

It may be suggested that the perspiration was due to the nausea and vomiting excited by the drug. Those who witnessed the effects of this medicine will certainly not ascribe them to the depression from nausea; but we may add that the perspiration was too profuse to be due to mere depression and nausea. Moreover the perspiration occurred often some hours before the nausea or depression set in. Again, in children, though the drug in some cases caused much and repeated vomiting, there was no perspiration; moreover, in many cases, especially among adults, the full phy-

siological effects of the drug were obtained without either nausea or depression.

We have tried in several cases a tincture from the leaves, and in one case an extract made from the tincture, and found these preparations equally effectual as an infusion with the dregs. We find also that a strained infusion is equally efficacious as one with the dregs, from which we conclude that the active principle is not the oil, so abundant in these leaves. In one case we administered a strained infusion of the root without any effect, and in three cases an infusion made from the bark of the stem, giving also the dregs. This last preparation is also active, though it appeared to us to excite more vomiting and to cause more depression than the preparations from the leaves.

The following account of the effects of jaborandi on the eye is written by Mr. JOHN TWEEDY:—

"From the account given in the *Pharmaceutical Journal* of the 16th inst., by Mr. Martindale, of his personal experience of the physiological effects of jaborandi, it appeared that in addition to its diaphoretic and sialagogic actions, this drug was capable of exerting a decided influence on the accommodative apparatus of the eye. About half an hour after taking fifty grains of the powdered leaf in an infusion, Mr. Martindale found that his vision for distance was greatly impaired, although he could see near objects distinctly. It was stated that the pupils were slightly dilated during this time, but Dr. Ringer, who was called in, informs me that this statement was not correct.

"In order to ascertain, if possible, what effect jaborandi really had upon the eye, some of the extract was placed within the conjunctivæ of several patients. Of its effects on the pupil full particulars have been given above. My attention was directed more particularly to the state of vision and the accommodation, and to the opththalmoscopic appearances of the fundus oculi. I must, however, confess that as far as the six or seven patients that I examined were concerned I failed to find any constant or definite changes in the appearance of the eye beyond contraction of the pupil. One thing, however, was noticed — namely, that whereas the details of the fundus of the unaffected eye could be seen clearly without a lens behind the mirror of the ophthalmoscope, a weak concave lens was necessary to see clearly the details in the eye experimented on, thus showing some tension of accommodation.

"Failing to elicit any definite or satisfactory information respecting the condition of the accommodation of the eye, in these patients, I determined to apply some of the extract to my left eye, and to note its effects. Accordingly, at 1.30 P.M., I carefully tested the state of vision of my left eye, and found that I could read easily and clearly No. 1½ of Snellen's type from 4 in. (my nearest point) to 22 in. (my farthest point), and that V=$\frac{1}{1\frac{1}{2}}$; i. e., at a distance of 10 ft. I could read No. 10 of Snellen's type. (It may be well perhaps to state for the benefit of those not acquainted with Snellen's test-type, that whenever I shall express the state of vision or V by a fraction, the numerator will represent the distance at which I stood from the type, and that the denominator will represent the size of the type seen at that distance, or, more correctly, the distance at which that type makes an angle of five minutes at the optical centre of the eye.) I next made my left eye myopic by placing before it a convex lens of ten inches focal length, and found that I could see clearly and distinctly the fine vertical line of the dial I employ for estimating the degree of astigmatism, at a distance of nine inches. At 1.45 I placed within the conjunctiva a drop of the extract of jaborandi, which produced smart pain for about five minutes. After the smarting and the lachrymation had ceased, I tested the state of vision of the eye, and found that at 2.0 the nearest point of distinct vision for 1½ Snellen had been approximated to 3½ in., and the farthest point to 20 in., while the fine vertical line could not be clearly seen, with the convex 10 in., at a greater distance than 8½ in. At 2.15 the nearest point for 1½ Snellen was at 3 in., and the farthest at 14 in., and the greatest distance for the vertical line, with convex 10 in., was 8 in. I could, at a distance of 10 ft., make out some of the letters of 12 Snellen, but not even the letters of 30 Snellen were quite clearly defined. Just below the lower margins of each of the letters of 30 Snellen I could see, as it were, a fine shadow of half of each letter. There was at this time no perceptible contraction of the pupil. At 2.25 the nearest point for 1½ Snellen was at 3 in., and the farthest point at 12 in. The left pupil was now noticed to be contracted to about half the size of the right. At 2.30 I could scarcely make out any of the letters of 15 Snellen at 10 ft., and even 20 Snellen were not clear. I now observed that even those letters that I could make out appeared much smaller when viewed with the left eye than with the right, and that with the left eye they seemed to be at a greater distance from me than with the right. At 2.35 the nearest point for 1½ Snellen remained at 3 in., but the farthest point had receded to 15½ in. The inequality of the pupil was *in statu quo*. At 2.40 I noticed that all objects, but especially distant ones, appeared much bolder, brighter, and better defined with my right eye than with the left, although under ordinary circumstances the vision of the left eye is more acute than that of the right. There appeared to be, in addition to the short-sightedness of the left eye, an actual impairment in the sensibility of the retina, producing imperfect amblyopia. At 2.50 the nearest point for 1½ Snellen was at 3½ in., and the farthest at 16 in. The fine vertical line could now be clearly seen with the convex 10 at 8½ in. At 2.55, V=$\frac{1}{1\frac{1}{2}}$, and I could now decipher some of the letters of No. 10, all the letters being clearer and better defined. The inequality of the pupils, however, remained the same. At 3, I could read even No. 8 Snellen at 10 ft., and there was but little appreciable difference in the apparent size or distance of the letters when viewed with the right and left eyes alternately. The left pupil had relaxed a little, but was still smaller than the right. At 3.10 P.M. the nearest point for 1½ Snellen was 3½ in., and the farthest point at 18 in. The vertical line could now be seen at 9 in. with convex 10 in. At 3.30 the vision of the left eye had resumed its normal state, but it was not till after four o'clock that the left pupil had thoroughly relaxed.

"From these facts we may conclude that jaborandi locally applied to the eye causes, (1) contraction of the pupil; (2) tension of the accommodative apparatus of the eye, with approximation of the nearest and furthest points of distinct vision; (3) amblyopic impairment of vision from diminished sensibility of the retina. These effects, however, do not last long. In my own case the approximation of the near and far points of distinct vision had declared itself in a quarter of an hour, and reached its maximum in about forty minutes. It then gradually subsided, and had entirely passed off and the eye resumed its normal state in about an hour and a half."

AUTOPSY OF THE TRING CENTENARIAN WHO HAD ATTAINED THE AGE OF ONE HUNDRED AND ELEVEN YEARS.

BY SIR G. DUNCAN GIBB, BART., M.D., LL.D.,
PHYSICIAN TO THE WESTMINSTER HOSPITAL.

AN account of the autopsy of the old dame Mrs. Elizabeth Leatherlund, known as the Tring or Hertfordshire centenarian, just deceased, who was within three months of attaining the great age of one hundred and twelve years, will be most fittingly recorded in the pages of THE LANCET. Of the correctness of her age, as I have already had occasion to state in a communication brought before the British Association at Belfast in August of last year, there is no doubt, and very shortly a paper of mine, embodying all the proofs of this, will be brought before one of our scientific institutions. But it may be stated here, that she mentioned she was born at Chinnor, in Oxfordshire; she gave the christian name of her father correctly as well as her own; her maiden name she described as Herne, although spelt Horam in the Parish Register of Baptisms at Chinnor* for 1763, in which occurs this:—"Elizabeth, daughter of Thomas Horam, Travailer, April 24." No subsequent entry occurs in this Register for thirty-seven years, giving her own or father's name, which disposes of an objection to her age that was brought for-

* Through an error last year, Dover was stated in place of Chinnor.

ward in *The Times* some months back. Then she stated she was twenty-eight years old, or probably twenty-nine, when her first child was born. When I saw her in October, 1873, I felt that the crucial point would be the discovery of the date at which her eldest son and child, Samuel Leatherlund, with his wife and children, and other persons to the number of thirty-five, were drowned by the upsetting of a large waggon laden with hop-pickers, on crossing a wooden bridge over the river Medway, at Hadlow, in Kent, many years back. She could not give me the year, but on writing to Dr. Miles Coverdale Hooker, at Hadlow, he at once kindly furnished me with the date of the catastrophe, as October 20th, 1853, and sent me a photograph of the monument, with the names of Samuel Leatherlund, his wife, children, and kinsfolk, with their ages, who were buried there. Samuel's age was down as fifty-nine, and, curiously enough, all this information must have been correctly furnished by one daughter who escaped, as I learnt by referring to the newspapers of the time, which gave a very full account of the affair, together with the various inquests on the bodies. If the son was fifty-nine, or probably near upon sixty when he lost his life in 1853, he would have been eighty-two now, and deducting that from one hundred and eleven or one hundred and twelve, the age she would have shortly reached, it would have made twenty-nine when she was confined of him, which tallies with her statement. This, medically, is a matter so clear that it requires no further comment. By her husband, Joseph Leatherlund, a private in the Bucks Militia, who died at Carrick-on-Shannon about 1816, she had three sons and two daughters. The eldest was Samuel, and the youngest and only surviving is Saborah, who says she is near upon seventy (although she looks younger), and the mother of nine children, the eldest of whom is thirty-seven and the youngest sixteen.

On my visit to the old dame, in October, 1873, a most careful physical examination was made, including the use of the laryngoscope, which at first very much frightened her. Generally speaking there was an absence of senile changes in any part of the body, and I compared her condition at the time in some respects to that of a girl of sixteen. She made the tenth living centenarian I had examined, and unquestionably she looked ten years older than any of the others. My friend Mr. E. N. Lipscomb, of Tring, who had occasionally seen her, kindly promised to let me know when anything happened to her.

On January 19th, a letter from him, late in the day, informed me of her death the preceding night. Accordingly I proceeded early next morning to Tring, to meet him, for the purpose of examining her. He was unfortunately called away to a distance, but he left instructions with his assistant to aid me in his absence, and we proceeded together to the Red Lion Inn, Frogmore-street, where I made the autopsy myself, the assistant recording the appearances as they were described to him.

Autopsy at 12.30, *about thirty six hours after death.*—Height during life was four feet nine or ten inches; the body, therefore, was small and proportionate to her height. The rigor mortis was slight, and no odour was exhaled from the body. The integuments generally were of a yellow colour with a shade of brown, but not darker than they appeared during life. They were a little loose over certain parts of the body, but the attenuation of the muscles, especially about the neck, did not seem to be so great as when she was seen by me in October, 1873. The muscular development generally was fairly good, and no decided emaciation to speak of existed. The mammæ were firm and well developed, though small, with no dark areolæ around the nipples. Over the abdomen were the usual marks seen in persons who have borne children. In sewing up the body afterwards, the skin was so tough that the needle would scarcely penetrate it. On reflecting the integuments over the chest and abdomen, a little adipose tissue was found over the pectoral muscles, and over the abdominal muscles it varied in thickness from an eighth to nearly a quarter of an inch. The cartilages of the ribs at their junction with the bone were cut through with the greatest ease and facility, the knife meeting with no resistance from any osseous changes. The cut surface presented a narrow rim of true white cartilage, whilst the other part possessed a brownish tinge, the result of some change allied to fatty degeneracy, for a slight roughness was manifest to the finger, although the middle structure was quite soft; but before division of the costal cartilages, the thorax could be compressed with ease, through their elasticity, as I had seen during life.

The lungs were healthy, crepitant throughout, and had the usual appearance. Some slight congestion of the posterior part of the left was present, which, to some extent, may have been hypostatic, yet, associated with what was described as a trifling cold, it was the immediate cause of death. At the apex of each lung was a trifling adhesion, readily broken down, the connecting membrane having the appearance of ordinary areolar tissue. Both lungs at the margins of their lower lobes had an emphysematous fringe. The heart was perhaps a little large in proportion to the size of the body; it weighed with the arch of the aorta thirteen ounces exactly. In structure it was soft, a little flabby, and had a slight covering of fat. The coronary arteries were distinctly observed, but had not undergone any change. The right side of the organ was filled with dark clots of blood, whilst the left was empty. The muscular structure, cavities, and valves appeared to be normal. The arch of the aorta generally was enlarged, dilated, and somewhat attenuated; at its commencement the circumference was four inches and one-sixteenth, whilst at its termination it was three inches and one-fourth. An atheromatous patch, the size of a silver threepence, was present on the lower surface of the transverse portion of the arch, whilst at the commencement of the anterior and left part of the ascending portion a ridge of atheroma existed, which did not involve the semilunar valves.

On opening the abdomen scarcely any trace of the omentum was observed. The stomach and alimentary canal were perfectly healthy, and not distended with flatus. The liver was of fair average size for the body, of firm healthy structure, possessing a light claret-brown colour, and free from any white spot or patches. The gall-bladder was large in proportion to the liver, and filled but not gorged with bile; it contained no biliary calculus. The spleen was of the usual purple colour, comparatively small, slightly curved in shape, but healthy and firm. Both kidneys appeared to be healthy, the cortical and medullary portions fairly distinct, but in general structure soft and flabby. The ureters were normal, and so was the bladder, which was nearly full of urine. The uterus was very small, the Fallopian tubes and ovaries equally so, all quite healthy. The thoracic and abdominal aorta and other bloodvessels were soft, and free from any abnormal changes. The tongue, larynx, and trachea were removed for examination. Some of the papillæ on the dorsum of the tongue were much enlarged. The larynx was small and compact; the epiglottis, which had a slight notch on its superior margin, possessed the natural colour, shape, and appearance of early life. The vocal cords, short in length, had the merest tinge of yellow, but were otherwise normal. The aryteno-epiglottidean folds, the ventricles, and all other parts of the larynx were as perfect in their formation as in a young person. All the cartilages of the larynx were flexible, with an absence of any calcareous changes, unless in the central solid parts of the wings of the thyroid. The rings of the trachea were white and glistening, perfectly flexible and soft, and could be compressed in any direction. The os hyoides was thin, the great cornua slender, one of them fractured on removal, and the right lesser cornu elongated.

The heart, tongue, larynx, and trachea were brought away, and have since been presented to the College of Surgeons for their museum.

I must not forget to mention that the cornea of both eyes was free from any arcus senilis or annulus, although her sight had not been very good of late years. Yet she had been able to knit twine bags almost to the very last. She was of pure gipsy descent, and her father's family of Herne or Horam was, it appears, well known in Herts, Bucks, and Oxon as belonging to wandering tribes of gipsies.

Bryanston-street.

UNIVERSITY OF EDINBURGH.—Two sums of £500 and £1000 have been bequeathed to the Senatus for the foundation of bursaries, the former by the late Mrs. Johnstone, of Harthope, Moffat, to be called the "Johnstone Bursary," and the latter by James Lambert, Alloa, to be called the "Lambert Bursary."

A Mirror OF HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum, tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

LONDON HOSPITAL.

CASES OF NERVOUS DISEASE; WITH CLINICAL REMARKS.

(Under the care of Dr. HUGHLINGS JACKSON.)

Disappearing Paralysis.—The expression "disappearing paralysis" is not, Dr. Hughlings Jackson says, a very good one; but what is meant by it will be seen by examples. It is not an uncommon thing to see a patient who has ordinarily evidence of some palsy or paresis who can by effort overcome that palsy or paresis for a time. The principle is displayed in cases which are in other respects exceedingly different. Thus a patient is seen to walk with exaggerated flexion of the thighs on the pelvis, evidently to clear the ground, because the extensors of the feet are weakened or paralysed. But if that patient be seated with a view to a more careful examination, we may find that he extends his feet very well. Yet the exaggerated thigh action is good proof of the veritable existence of the palsy spoken of. In some cases of paresis of an ocular muscle causing great trouble to the patient, it may be difficult to detect any abnormality by ordinary examination. We have to note the secondary deviation of the healthy eye; and this will show us how great is the effort the patient has to make in order to move the other eyeball by its weakened muscle, or rather nerve supplying that muscle. Or we may have recourse to a coloured glass, and thus we indirectly discover weakness of an ocular muscle which the patient can by effort overcome. In cases of partial paralysis of the palate after diphtheria we hear that the patient "talks through his nose"; but when we ask him to say "rub," "head," or "egg," these sounds not only do not become "rum," &c., but they may be pronounced well. (In uttering these explosive consonants it is necessary that the palate should shut off the mouth from the nose.) We may, however, show that the palate is weak by getting the patient to repeat the test-words rapidly; then we have "rum," &c. The patient, who is said, often no doubt correctly, to be almost constantly wandering, can by effort "pull himself together" so as to answer simple questions, and to show no sign of mental confusion on ordinary matters. It is for this reason among others a great mistake to judge of a patient's mental condition by direct questioning for a short time about simple things. In cases of that particular difficulty of articulation which sometimes occurs with right hemiplegia, and which is called ataxy of articulation, we find a good illustration. This kind of defect of articulation bears, symptomatically, the same sort of relation to "paralytic articulation" (from disease in the medulla oblongata) as locomotor ataxy does to paraplegia. In many of these cases the patients have the power of uttering single words well by effort, but they cannot talk well continuously. Thus Dr. Hughlings Jackson has taken a carefully prepared and complete list of words, or rather articulations, to the hospital in order to test the talking of a patient who had "ataxy of articulation" to see if palatals or labials or dentals suffered especially. He found that, although the patient's usual talk was unintelligible, he could utter every syllable except "zed." Dr. Hughlings Jackson does not, however, think it probable that in ataxy of articulation from disease of the brain there would be defect so definite as in labials, dentals, &c. There would, he supposes, be a far more compound defect.

The following remarks by Dr. Hughlings Jackson are on an old case:—"Patients who make frequent mistakes in *words* often speak correctly to the doctor. The first question I put to a patient who was paralysed on the right side was, 'What age are you?' The reply was, 'I think I'm five and fourpence;' then she turned to her daughter, and said, 'Four shillings, ain't I?' I suppose I took her unawares, for in a long conversation I heard no further mistake of any kind, although I listened carefully. This patient *was brought to me* on account of defect of speech."

Patients who are the subjects of chorea are sometimes nearly quite still in the out-patient room when brought before the doctor.

On the nature of the Disorder of Co-ordination in Locomotor Ataxy.—In speaking of a case of locomotor ataxy, Dr. Hughlings Jackson said that under the term "disorder of co-ordination," symptoms were placed which were of fundamentally unlike nature. Thus, chorea and locomotor ataxy are spoken of as disorders of co-ordination. They *are* both disorders of co-ordination, but they are very unlike. They are not only unlike in that different parts of the body are affected, but in a far more important way. The functional nature of the changes in nerve-tissue is different. In chorea there is instability of nerve-tissue, and hence there are frequent discharges as the excessive involuntary movements signify; in locomotor ataxy there is destruction of nerve-tissue (wasting), and consequently loss of power.

At first glance it seems absurd to speak of there being loss of power in locomotor ataxy, at any rate in an early stage of this disease. The patient has great power in his legs. Dr. Hughlings Jackson believes that there is paresis, and this only of certain highly special *movements*. As a centre (the posterior column of the cord) is affected, there could not be *loss* of power in single muscles or groups of muscles, but loss or defect in *movements*, in which several muscles co-operate. Dr. Hughlings Jackson believes that the first *movement* to fail in cases of locomotor ataxy is that in which the peroneus longus is the *muscle* chiefly concerned. In other words, there is weakening of that most important locomotor movement which serves in throwing the body over on to the other foot, pivoting on the ball of the great toe. But by this the *erratic* gait of ataxy is not explained. We can, however, show that from local palsy or paresis we get *secondary effects*; it is here that we get the explanation. To show this, we must take a simple case from another department of clinical medicine—from ophthalmology.

In a case of paresis of the external rectus we find more than diplopia. The patient's giddiness and reeling gait are not due, as is commonly supposed, to double vision. There is, from an attempted but not accomplished movement of the eyeball, erroneous estimation of the *position* of objects. This is because, to use metaphorical language, the mind judges, not by the ocular movement accomplished, but by the effort to move the eyeball—judges, to use an expression of Bain's, by the "outgoing current." We note next that the strong attempt to move the paralysed or weakened external rectus leads to over-movement of an associated muscle—viz., of the internal rectus of the healthy eye; there is "secondary deviation" of that eye. Applying the principle to locomotor ataxy, we should say that there is a double difficulty to be considered in the patient's walk—erroneous estimate of the locomotor movement intended and over-action of associated movements.

In an early stage of locomotor ataxy these ill-consequences can, whilst the eyes are open, be partly corrected by great voluntary effort, by stiffening the back and certain parts of the legs, by throwing out the arms, &c.

WESTMINSTER HOSPITAL.

RENAL AND VESICAL CALCULUS; STRICTURE OF URETHRA; EXTRAVASATION OF URINE; DEATH.

(Under the care of Mr. COWELL.)

FOR the notes of the following case we are indebted to Mr. W. R. Cheyne, surgical registrar.

Thomas N——, a painter, aged forty-two, was admitted on November 2nd, 1874, with the following history. He was born of healthy parents, and had lived in Lambeth most of his life. When eight or nine years old he was in the Westminster Hospital for stone in the bladder. At the age of twenty he had gonorrhœa and a chancre, and some time after there were indications of stricture of the urethra. At thirty he was in Guy's Hospital for three weeks with renal calculus, but there was no evidence of the passage of a stone, and the symptoms continued more or less ever since. For the last twelve months the stream of urine had been

getting smaller, and the patient had had frequent nocturnal micturition. The urine had been thick, offensive, and streaked with blood, and, occasionally, pure blood had preceded it. The flow had of late sometimes stopped suddenly. Pain, which at first was worst at the beginning of micturition, and at the end of the penis, was now situated in the perineum and left groin, and was of a dragging character, and increased at the end of micturition or by sudden movement. He had had a scrotal rupture on the right side as long as he could remember, but it had given no trouble. The constant straining in passing water had brought slimy stools and blood from the bowels for the last eight or nine weeks. He had taken gin freely of late, and had kept at work until a few days ago.

When admitted the man was spare and haggard-looking. He complained of much pain in the perineum, where there was a large, moderately hard, and very tender swelling. He passed urine—which was highly muco-purulent and streaked with blood—with difficulty, and in a very small stream. The bladder was not distended, but the lower part of the abdomen was hard and tender. The bowels were loose and the stools dark. Soon after admission an attempt was made to pass a catheter (No. 1, both silver and filiform elastic), but without success; the attempt caused very considerable pain. He was ordered beef-tea and milk diet.

Nov. 3rd. — To-day the patient passed a considerable quantity of urine in a warm bath, and subsequently the house-surgeon made another attempt to pass a small catheter. To take five grains of iodide of potassium three times a day.

5th.—Iodide of potassium discontinued, and three grains of sulphate of quinine ordered every four hours.

6th.—The swelling in the perineum had increased between the angle of the scrotum and the anus. It was now hard and elastic, without fluctuation, being tender to the touch, and with a constant throbbing pain. Mr. Cowell found the bladder distended to a point midway between the pubes and umbilicus, but urine was still passed in small quantities. The question of puncturing the bladder per rectum was entertained, but as the relief afforded by the previous warm bath had been so great, it was ordered to be repeated. Brandy increased to six ounces, and ten minims of tincture of opium added to each dose of the quinine mixture.

7th.—At 7 A.M., whilst straining, extravasation of urine took place, and shortly afterwards he was found suffering severe pain in the left groin and lower part of the abdomen. His mind was wandering. Mr. Cowell saw him at 11.30 A.M., and at once punctured the bladder through the rectum. He also made a free incision through the lower part of the scrotum, carrying the incision upwards along the left side to about an inch and a half above the pubes. The presence of the hernia on the right side had rendered any incision there undesirable. A quantity of infiltrated urine made its escape, and a slough was found to exist beneath the fat on the pubes, from which a small quantity of pus was discharged. The urine which escaped was very fetid, and full of mucus.

9th.—Patient had frequent vomiting; tongue dry. Pulse 102, weak. The swelling in the perineum had much diminished, and the pain had nearly ceased. There was some redness of skin over the lower part of the abdomen.

11th.—Nourishment taken fairly well; tongue moist. Pulse 102. Urine had drained away freely from incision, and there was no increase of redness or tension. There had been no rigor.

12th.—Patient looked thinner; he was drowsy, restless, and wandering. Pulse 120, weak. Tongue dry and brown. There was vomiting; bowels relaxed; urine passed freely by the tube. He was ordered one ounce and a half of brandy mixture every hour, and a subcutaneous injection of morphia at night.

13th.—Passed a restless and delirious night, but rallied towards morning. Pulse was somewhat better. The incision wound looked drier, and the cutaneous redness was less marked. There was no vomiting during the day, but patient took drinks with difficulty. He sank at night, and died at 11 P.M.

Autopsy.—The kidneys, ureters, bladder, and urethra were removed *en masse*. The left kidney was large, and on section was found to contain a large stone of irregular shape, yellow, hard, and brittle. Moulded to the part, it completely occupied the pelvis, and extended into the calyces. The knobbed extremities or calyx portions were slightly encrusted with a white and softer material, apparently phosphatic. The right kidney was smaller, and contained no calculus. The calices were surrounded with fat, and the rest of the organ was pale and similar to the left. The left ureter was thickened and enlarged to twice the size of the right. In the urethra there was a tight cartilaginous stricture at the commencement of the membranous portion. The bladder was contracted, thickened, and the mucous membrane highly injected and dark. There was a small stone in the bladder, about two lines square, the sharp projections of which showed that it had come from one of the calyces of the kidney. It had apparently been in the bladder but a short time, and probably came from the right kidney.

ROYAL INFIRMARY, EDINBURGH.

EXCISION OF HALF OF THE TONGUE FOR EPITHELIOMA; RECOVERY.

(Under the care of Professor SPENCE.)

FOR the notes of the following case we are indebted to Mr. George Kirkwood, late resident surgeon.

James A——, aged forty-seven, residing in Dundee, was admitted on the 15th of April, 1874, with a growth on the right side of his tongue. This growth commenced about the beginning of April, 1873; and, when first noticed, was about the size of a pea, and hard. Before he consulted Professor Spence it had reached a considerable size; but as it had a smooth surface, and was extremely like a condylomatous growth, constitutional remedies were tried. At the same time some stumps which seemed to be irritating it were removed. The patient showed himself at intervals till his admission, when it was evident that the tumour, instead of diminishing in size under the use of the remedies employed, was gradually extending into the substance of the tongue. It also assumed more characteristically the appearance of epithelioma, and was the seat of considerable pain.

On admission there was a hard, lobulated mass on the right side of the tongue, extending from about one inch from the tip backwards to within a quarter of an inch from the base. In front it reached to about a quarter of an inch from the middle line of the tongue, but further back it approached close to the raphe. Its surface had a rough, uneven appearance, but at no part was there any ulceration. There was no enlargement of the cervical glands, and the patient's general health was good.

On the 20th April Professor Spence removed the diseased half of the tongue by dividing the jaw at the symphysis. The tongue was drawn forward by means of two pieces of stout cord, introduced one on each side of the middle line. The tongue was divided between these strings, and the diseased part removed close to its attachment to the hyoid bone. In order to get rid entirely of the diseased mass, it was found necessary to curve the incision to the left of the middle line, as it approached the base of the tongue. After the bleeding vessels had been secured, a hole was drilled through the entire thickness of the jaw on each side, close to the division made by the saw, and, by means of a stout silver wire introduced through these holes and twisted, the portions of the jaw were kept firmly fixed in accurate apposition. The soft parts were then stitched up, and a drainage-tube introduced through the floor of the mouth at the posterior end of the wound, so as to permit of free discharge, and to allow the mouth being more thoroughly washed out. A gum-elastic feeding tube was passed by the nostril and allowed to remain.

On the 21st he had slept well and felt comfortable. Pulse 104; temperature 102°. Milk and white of egg were given by the feeding tube every two hours, and brandy occasionally. The mouth was washed out through the drainage-tube every three hours with a solution of chlorate of potash.

On the 22nd the pulse was 92, of good strength; temperature 101°. Patient slept well.

On the 23rd, as the feeding tube gave rise to considerable irritation in the nose and pharynx, it was removed, and the patient fed through a gum-elastic catheter passed over the remaining part of his tongue. He was able to wash out his

mouth with the chlorate of potash, and did so very frequently. There was free discharge by the drainage-tube, and there was no fetor. Pulse 94; temperature 101·4°. An enema of castor oil given.

On the 25th the tongue was granulating well, wound in the face healed, and several stitches removed. The patient's general health was satisfactory. He took a good deal of milk with white of egg and Liebig's extract of meat. The catheter was still used in feeding, because when swallowing was attempted the fluids passed out by the drainage-tube.

On the 30th the tongue was cicatrising quickly, and the cut surface was contracting. The patient could swallow a little, but not sufficient to allow of the discontinuance of the use of the catheter. Pulse 78, of good strength; temperature 99·5°.

On May 6th, as the discharge had almost stopped, the tongue being nearly healed, the drainage-tube, which was causing some irritation, was removed. The patient still paid great attention to the washing out of his mouth. The general health was good.

On the 13th the tongue had healed; the wound where the drainage-tube had been had healed, and the patient now swallowed quite well. The section of the jaw had not united yet, but it was getting much firmer. The two portions kept in excellent position without any trouble.

On the 19th the patient was very well, and got up every day.

On the 28th, as the jaw was pretty firm, the man was dismissed to the Convalescent Hospital.

He returned in a fortnight, and as the jaw was firmly united, the silver wire was removed by cutting one end short and drawing upon the other with a pair of strong forceps.

Prof. Spence had an opportunity of seeing this patient early in the present month. He continued in good health, the incision was scarcely noticeable, and the union of the section of the jaw was perfectly even, a result which Prof. Spence attributed to the prevention of movement by the passing of the wire through the entire thickness of the bone.

Medical Societies.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

THE meeting of this Society, on Monday, the 26th inst., Dr. C. J. B. Williams, the president, in the chair, was occupied by a long and elaborate paper by Dr. C. THEODORE WILLIAMS on the Temperature in Phthisis, which gave rise to a very interesting discussion. The meeting was prolonged beyond the usual time, and the usual time of extension exceeded. The paper was illustrated by several large charts, showing the average temperature curves in the various stages of the disease, and numerous temperature records were also shown.

Dr. WILLIAMS first referred to the work previously done on the subject by Jockman, Wilson Fox, Ringer, and Niemeyer, and criticised their methods of classification of cases and the mode in which their observations were conducted. He believed that the observations previously made were of little value from the fact that the cases were selected in an arbitrary manner, and were observed chiefly in the acute stages or severer forms, and that the temperature had not been taken with sufficient frequency daily, nor during the hours of rest and sleep. He objected, moreover, to the classifications adopted by Jockman, Wilson Fox, and others. The present paper was the result of observations on 104 cases, 63 males and 41 females, suffering from consumption of all stages, in Brompton Hospital, where there were the additional advantages of an equable temperature and well-regulated atmospheric and hygienic conditions. The temperature was taken at least five times a day, and in many cases ten or twelve times, for periods varying from 7 to 30 days. They were nearly all taken in the axilla, and in some cases in the mouth also, the thermometer being left in for ten minutes. The total number of observations recorded was between 4000 and 5000. In addition, in order to ascertain more fully the exact phenomena, especially during the night, in twelve cases the temperature was taken hourly during twenty-four consecutive hours, and in some cases this was repeated. The general symptoms and the diet and regimen were also carefully noted. The cases were divided into three classes, according to the stage of the disease, as shown by the physical signs; and those in the first and third stages again subdivided, according as the disease was active or quiescent. The second stage, that of softening, was regarded as a whole.

The paper next stated in detail and at considerable length the results of an analysis of the observations in three different stages, together with the maximum, mean, and minimum temperature observed at each hour of the day at which it was taken, together with some illustrative cases of each form of the disease, showing the character of the cases. The following brief summary will give some idea of the principal conclusions arrived at. In many cases of chronic phthisis the temperature is normal, and often below normal, even as low as 93° to 94° F.; this is especially seen continously in the first and third stages when quiescent. In pyrexial cases the temperature is seldom very high, 104·6° being the highest recorded in any case. In the majority of cases at all stages, a marked rise takes place after 2 P.M., and a rapid fall occurs after 10 P.M., which continues throughout the night, and reaches the minimum, which may be as low as 94°, before 7 A.M. A slight recovery is then observed, but the normal is seldom attained till 9 or 10 A.M. This temperature curve may be shifted a few hours, the rise taking place later in the afternoon, and the high temperature prolonged further into the night, the lowering being consequently delayed by some hours. Any continuous rise of temperature is followed by a certain amount of collapse, though not always to a corresponding degree. At all stages of the disease, the afternoon rise, the nocturnal fall, and early morning collapse occurred, and observation on a healthy man, under similar conditions, showed that this fall was characteristic of phthisis. In the first stage there is a more gradual rise and fewer extremes than in the third. In the second the condition is intermediate between the active forms of the first and third stages. In the active third stage the greatest variations were observed, the afternoon exacerbation and the nocturnal collapse being most strongly marked; in one case the thermometer rose to 104° and sank to 93°, a range of 11° F. In some cases tubercle appears to form, and the various processes of disorganisation of the lungs proceed uninterruptedly, without causing any considerable rise of temperature, and they may even be accompanied by a temperature below normal, and the author believed that this might be explained by the influence of the disease tending to produce a condition of collapse. He ascribes the course of the temperature to the two influences of (1) the excessive action of the processes engaged in the maintenance of the bodily heat, and (2) the tendency to collapse from weakening of the bodily powers—these two struggling for the mastery; the effect of the former being seen in the afternoon and evening rise, and of the latter in the rapid nocturnal fall to the morning temperature, and also in the subnormal temperatures occasionally seen in all stages of the disease, even while active tuberculisation is going on. The author believes that phthisis has a distinct temperature course, and that the idea of a dependence on individual idiosyncrasy is founded on imperfect observations; the irregular course observed in the last stages of the disease is also a source of fallacy, and is due to the conflicting forces at work. Some details of the effect of pyrexia on weight, &c., concluded the paper.

After the reading of the paper, Dr. Theodore Williams, at the request of the President, demonstrated the principal points in the charts, showing the average temperature curves in some typical cases and their relation to the normal. The President remarked that he considered that the demonstration of the daily fall of temperature in phthisis was one of the most important results of the observations.

Dr. WILSON FOX opened the discussion by remarking that the profession was greatly indebted to anyone who would undertake such elaborate observations, requiring so much time and care, and also analyse the results so as to show the diurnal variation in the course of the disease. Dr.

Fox had long been of opinion that the temperature should be taken more frequently than only in the morning and the evening in cases of phthisis. He was especially glad that Dr. Williams had analysed these cases, as he had not yet had time to do the same with his own cases, and was, moreover, anxious to extend their number before doing so. The fact that the ante-meridial temperature is as a rule low and the post-meridial high in phthisis is one which is already well known; but the most important question for practical purposes was at what hour it is best to take the patient's temperature as a rule. He gathered from the paper that the greatest number of maximum temperatures was observed at about 5 P.M. But the greatest difficulty with regard to this was shown in Dr. Williams's cases—viz., that on no two consecutive days in any case was the temperature alike at the same hour. In a typical case, resembling the average shown on the charts, the temperature was lowest at 8 A.M., but on looking at the temperature sheets of individual cases, temperatures of 98°, 99°, and 100° were found at that hour, and in many cases it was normal or subnormal. So at 3 P.M. there may be temperatures of 100°, 101°, or 102°. on the average, but in many cases it is 97° or 98° at that hour; and although these do not show in the average, they tell on the progress of the case, and are especially important as regards therapeutic experiments. These variations seemed to show that therapeutics must be directed rather by the vital symptoms than by the temperature. Again, did Dr. Williams consider this course of temperature one typical of phthisis? Phthisis is one of the chronic wasting diseases, and although the opportunities of physicians of seeing and carefully watching the course of cases of chronic suppuration were rare, in some cases of chronic suppurative disease attended by the formation of abscesses in various parts under his care, Dr. Fox had observed a diurnal variation amounting to 10°, with a post-meridial or nocturnal fall to 95°. Dr. Fox believed that the phthisical temperature was, as had been remarked to him by Dr. Sanderson, that of a chronic suppurative fever. With regard to the distinction drawn by Dr. Williams of dividing phthisis into stages prior and subsequent to suppuration, this has probably little to do with the etiology of phthisis; for it is not the mere presence of pus, but the process of the *formation* of pus which determines the pyrexia. Nor can any great difference be discovered between the fever of phthisis, suppuration, &c., whilst the distinctive inflammatory changes are taking place. Another important point was that in some cases of consolidation of the lung, where tuberculisation is progressing somewhat rapidly, as in one of the cases related, the temperature was comparatively low. These are exceptions to the general rule. That acute inflammatory processes are attended by great variations in temperature—e. g., in acute pneumonia— is a well-known fact, but we cannot say why these variations occur in individual cases.—Dr. DOUGLAS POWELL regretted that Dr. Williams had formed so definite an opinion of the unity of phthisis, and had not classified the cases otherwise than as in the first, second, and third stages. He thought a much more useful classification might have been adopted, especially with regard to the first and second stages. Everyone who had studied the disease so carefully as Dr. Williams must have observed the differences in the mode of origin of various classes of cases, one set beginning with an inflammatory catarrh, and accompanied by high temperature throughout, another commencing insidiously and with but little elevation of temperature, whilst in other cases the elevation might precede the physical signs, and they might appear slowly or rapidly. The observation of these different forms in the early stages ought to give some idea of the character of the disease, and when mixed together they have much less value; and Dr. Powell protested against this mode of classification by stages only. The observations were of value, as showing the evening temperature of phthisis, and also especially the great fall which occurs in the small hours of the night; and the latter may be of value in treatment. Dr. Powell attributed this fall to exhaustion, and believed that if patients were fed in the night it might probably be checked. The importance of this was shown by the fact that in the first stage, as shown by the table, whilst there was a rise of barely 2° above normal, there was a fall of 3° or 4° below. As a proof that these patients are not enough sustained in the night, Dr. Edward Smith's observation might be cited, that the night-sweats, which depend on the fall of temperature, were best checked by allowing the patients to have milk to sip by their side. The most striking fact, however, shown by the paper was the return in the third stage to a condition closely resembling that in the first; and in this stage all the forms gradually merge into one, and are indistinguishable from each other, so that the thermometric results are more striking.—Dr. DRYSDALE remarked on the fact that loss of weight did not necessarily accompany high temperature, a fact which was borne out by his own experience. He believed that phthisis was essentially one disease, and that the amount of tuberculisation may be judged of by the rise of temperature.—Dr. T. HENRY GREEN remarked that it appeared from the charts that the temperature in the third stage of the disease reached the condition which it has in the first. He inquired whether Dr. Williams believed that the rise of temperature in the third stage was due to the softening of the diseased portions or to the extension of the disease—in fact, the occurrence of the first stage in other parts of the lungs. He believed that the latter was the real cause. He asked also whether Dr. Williams had observed the occurrence of an infective process with rapid extension of the disease in the lungs, and whether this was indicated by the temperature, and whether a general tuberculisation of the lungs was shown by it.—Mr. HERBERT PAGE remarked that the temperature curve seen in the first stage resembled that observed in cases of simple abscess, especially in the exacerbation of the fever in the later part of the day and the fall towards the early hours of the morning. A similar course was also seen in cases of amputation running a favourable course, whilst the occurrence of secondary disturbances or of abscesses, &c., was shown by a disturbance of this curve.—Dr. LEARED inquired whether any of Dr. Williams's observations showed the condition of the temperature in the pretubercular stage. Dr. Ringer's observations had seemed to promise some result in giving the power of early diagnosis of phthisis before the occurrence of any physical signs, but the results had not been of such value as had been anticipated.—Dr. SYMES THOMPSON observed that the practical value of the observations seemed to be that they furnish a chart or statement from which some idea can be gained of the normal course of temperature in phthisis. Previous observers had found such difference arising from the idiosyncrasy of the patient as to make their attempts at getting a normal standard futile, and hence no conclusion could be drawn as to treatment. In the observations which were made by the committee of which Dr. Thompson was a member, on the action of quinine in pyrexia, great difficulty was experienced in getting at a normal standard of the range of temperature in tuberculisation. But the conclusion that quinine had the power of keeping down the temperature was unmistakable. Hence it appears that the great elevation of temperature can be prevented by quinine and the fall by giving food at night. There could be no question of the value of obviating the latter, but how far the prevention of the rise of temperature was of value was doubtful.—Dr. CURNOW concurred in Dr. Thompson's remarks on the difficulty experienced in fixing a normal standard for testing the value of quinine in pyrexia, and stated that in one instance in which quinine was thought to be of value, the divergence of the temperature results was so great that it destroyed the value of the case. He had observed that in some cases of phthisis, especially when occurring with diabetes or with albuminuria, there was no rise of temperature. He remarked that in cases of chronic phthisis hectic fever might supervene for a few days, and then the temperature return to the normal. The temperature of phthisis is that of hectic fever, and some cases of iliac abscess which he had observed precisely agreed with these cases of phthisis, showing the same subnormal state and evening declension in a well-marked manner. But with regard to pus-formation, he could not agree that this would account for the temperature, as in a case of acute brain-softening from embolism he had seen the same fluctuations. So in typhoid in the third week, and in cases of metastatic abscesses from the separation of fibrinous coagula from the heart valves. Hence the conclusion that these observations, to be of any value, must be supplemented by others observed with equal care in the general medical and surgical wards.—Dr. WILLIAMS, in reply, said that he had gathered many valuable suggestions from the debate, which he should endeavour to work out.

He said that he owed the idea of taking the temperature so frequently to a suggestion by Dr. Wilson Fox. Although the general course of the temperature in phthisis might have been shown before, he claimed to have shown the whole *course* of the temperature, the steady rise and regular fall which occur. His observations led him entirely to differ from Lebert's assertion that high temperature is of common occurrence in the morning, a condition which Dr. Williams had rarely found. He admitted that on no two days was the course alike in his own cases, but this was the case with healthy men; and the general rule held good that the low temperature occurred in the morning. The key to the variations might, in many cases, be found in the fact that the cycle was, as it were, shifted, and the highest point, instead of occurring at 7 or 8, might be at 9 A.M., the rise, declension, and fall all being postponed, but still the regular course was observed. He agreed with Dr. Fox that the temperature of the active third stage was simply that of suppuration; it agreed with that of cases of psoas abscess, and probably was akin to that of pus-formation. With regard to the classification of cases, he had tried every possible way of grouping, and had found it impossible to fix any satisfactory method. As to the question whether the fall of temperature was due to exhaustion, he was inclined to believe so, but was carrying out investigations on the subject. With respect to the cause of temperature elevation, he believed it was due to the softening and pus-formation rather than to tuberculisation, and he said that he had noticed it in cases where there were no signs of inflammation. In some cases he had seen an acute infective process of other organs, somewhat resembling pyæmia, occur. His observations in one case confirmed those of Dr. Ringer on the "pretubercular" stage. With regard to the use of quinine, he did not see the use of lowering the temperature, seeing that the patient may gain weight whilst the temperature is high, and may not be inconvenienced by it. But the low temperature is much more injurious. He promised to communicate the results of further observation in cases complicated with albuminuria, and on the effect of giving food at night.

The meeting then adjourned, having been protracted to a late hour.

OBSTETRICAL SOCIETY OF LONDON.

AT the meeting of this Society, held on the 6th instant (Dr. Edward J. Tilt, the President, in the chair), the following gentlemen were elected Fellows of the Society:—Alex. Hampton Brewer, M.R.C.S., Angus Frazer, M.D. (Aberdeen), William Owen, M.R.C.S. (Ebbw Vale), and Walter Alfred Satchell, M.R.C.S. Ed. (Kew).

Dr. JOHN WILLIAMS exhibited a case of Hydatidiform Mole. The subject, C. D——, aged thirty, had been married two years; was never pregnant before, but had suffered from dysmenorrhœa previous to marriage, and had passed clots since at the periods. The last catamenia occurred June 28th, 1874. Morning sickness ensued, and occasional sickness after food. During August she nursed an invalid, frequently exerting herself in lifting the patient, especially on the 17th, after which the sickness became worse, and the feet and ankles swelled, the œdema gradually extending upwards to the lower abdomen and labia, which were enormously swollen. There was no œdema of face or lower limbs. The abdomen was symmetrically enlarged; a tumour having the character of the distended uterus was felt, soft and elastic, but not fluctuating; no fœtal heart sounds were audible, but a placental bruit was once heard a little below and to the left of the umbilicus. Per vaginam the tumour could be felt filling the pelvis, the os uteri high up and tilted forwards close to the pelvis, not characteristic of pregnancy. The tumour was softish, as if it contained fluid, and a small triangular swelling filled the hollow of the sacrum. Taken together they had the characters of a retroverted gravid uterus. The breasts were enlarged, and the areolæ darker than usual, but not characteristic of pregnancy. On the night of Nov. 10th she was taken in labour, and was delivered the following morning of an hydatid mole, which consisted of a ruptured bag having the shape of the uterus, containing the vesicles forming the mole. The bag was evidently formed by the decidua, and was about a quarter of an inch in thickness. At one part it was thick and fleshy, though a section of it presented many cysts; this thickened fibrin was doubtless the imperfectly-formed placenta. Slight hæmorrhage occurred once some days before the onset of labour, and severe hæmorrhage at the time of labour, due to placenta previa. The case is unusually interesting, as the decidua was expelled almost in its entirety, and thus the mode of attachment of the vesicles to that structure was shown. They were arranged like beads on a string, which string was attached to the inner surface of the decidua. This fact favours the view that the hydatidiform moles were formed by degeneration of the chorion villi, and in this case the degeneration commenced probably soon after the formation of the placenta had begun.—Dr. ROUTH inquired if there had been any alternation of a watery and sanguineous discharge, to which Dr. Williams replied that there had been no discharge of blood at all till the patient came to the hospital.

Dr. J. ASHBURTON THOMPSON exhibited a specimen of Ascitic Fœtus. The head presented, and as the labour was tedious the forceps were applied and the head delivered, but, as was subsequently found, at the expense of the tissues of the neck. The arms were brought down, but still delivery could not be completed. Whilst absent, with the view to obtaining the assistance of his partner, Dr. Brunton, two immoderately forcible pains served to eject the fœtus. There were two points of interest in the case: one was the frequency with which little expulsive power existed when the uterus was over-distended; the other, that the pressure from above diminished the circumference of the abdomen by forcing a part of the fluid into the thorax; but the traction exerting pressure in the contrary direction increases the circumference by thoroughly extending the lower part of the abdomen, even preventing the whole of that cavity from being utilised in spreading out the fluid.—Dr. BARNES inquired whether the placenta was pale and friable, to which Dr. THOMPSON replied that it was.—Dr. JOHN WILLIAMS suggested that the specimen should be examined, as it was not a common one, and was of much interest.—The PRESIDENT requested Dr. J. Williams and Dr. Hayes to examine it in conjunction with Dr. Thompson.

Dr. W. BATHURST WOODMAN read a paper "On the Prevention of Mammary Abscesses by the Application of the Principle of Rest." The author had been struck with the rarity of mammary abscesses in animals, notwithstanding the forced abstinence from suckling which cats and dogs undergo from the drowning of their progeny, and in spite of the great distension of the udders of cows, mares, and other animals when driven to market, or for other reasons separated from their young. Acting upon this suggestion, he carefully abstained from those manipulations, and questionable "gentle" frictions which have so long been customary in such cases, and with the most satisfactory results. Where an abscess was threatening, in place of employing liniments, he enjoined perfect rest, the avoidance of all frictions and rough handling, and of suckling for a time, if possible from both breasts, but at all events from the one most implicated; the horizontal position, careful application of strips of isinglass, soap or lead plaster, or of an air-cushion with a hole in its centre, or of bandages taking their purchase from the opposite shoulder. In addition to these measures he employed preparations of opium, belladonna, or chloroform, applied in compresses, or ice, moist warmth, and leeches; the local congestion being also relieved by diaphoretics, diuretics, and aperients, belladonna, iodide of potassium, and sedatives being given if requisite. Illustrative cases of this method of treatment were given exemplifying its advantages.—Dr. BARNES observed that the principle of rest had long been applied to the treatment of inflammation of the breast. He himself had learned the value of it from Trousseau, when a student in Paris thirty years ago. That admirable physician taught and illustrated it with great earnestness. He placed the breast at perfect rest by carrying strips of leather spread with *emplâtre di Vigo* all round it, so as to lift it well up and exert constant support on the vessels. Thus œdema was prevented,

and engorgement soon subsided. It must, however, be remembered that this form of pressure was ill borne in the first inflammatory stage; it was chiefly serviceable when suppuration had taken place, and the abscess had been opened; the sac was then rapidly closed. In the earlier stages he had seen leeches do excellent service. The pressure then must be tighter.—Mr. ASHBURTON THOMPSON said there were two modes of treatment not referred to in the paper: the administration of tincture of aconite and total abstention from fluids during the necessary number of days. By giving minim doses of aconite every hour, he had succeeded in cutting short inflammation of the breast, which there was no doubt would otherwise have run on to suppuration very frequently—indeed, in three cases out of four. In cases of still-birth he had hitherto found abstention from fluids sufficient in every case to avoid every kind of mammary disturbance. Ice was allowed in moderate quantities, and no other fluid, from the time of delivery until the fourth or fifth day, when the breasts generally return to their normal state of quiescence. He had had two cases recently in which this method of treatment had been perfectly successful. The deprivation of fluid caused but little distress.—Dr. BRAXTON HICKS thought the principle of rest had been gradually coming upon us for years, friction only being resorted to among the poor and ill-educated. Surgery at the present day was all tending to quietude. Manipulations only led to suppuration, and often produced the extra amount of stimulation required to set it up.—Dr. MURRAY said the application of a belladonna plaster was of great service, keeping the arm at the same time fastened to the side. In some instances a slight process of friction upwards was productive of good.—Dr. MATTHEWS, whilst heartily assenting to Dr. Woodman's views, thought that the public also had largely endorsed his practice, since he had observed that it was a very common proceeding to apply a large lead plaster (spread upon leather) to the breast in cases where it became necessary to get rid of the milk. This of course rendered friction and all meddling impossible. He had found that two large and soft handkerchiefs suitably applied, one by way of sling around the neck, under the breast, the other in exactly the reverse way, over the breast, and tied around the body so as to include the breast between them, interposing a large pad of cotton-wool, to constitute a very efficient mode of applying pressure.—Dr. EDIS remarked that the chief thing to be remembered was to limit the supplies, to act on the bowels, and to ensure perfect rest to the mammæ. He was accustomed to order a belladonna plaster to be applied to the mammary region within twenty-four hours of delivery, thus exercising pressure as well as arresting the secretion of milk. Abstinence from fluids and great moderation in diet was enjoined for the first few days, an aperient mixture of sulphate of magnesia and iodide of potassium being given twice or thrice daily, to relieve the bowels. The shoulders should be raised and the arms kept perfectly quiet, the upper part of the chest being only lightly covered, any friction or drawing of the breasts being strictly prohibited. Where this method had been adopted he had never seen a single instance of mammary abscess. An evaporating lotion continuously applied to the mammæ was in some instances sufficient to prevent the secretion of milk, but the pressure obtained from the plaster was of great service, and effectually prevented the employment of any friction.

DR. HENRY M. MADGE brought forward the particulars of a case of Labour complicated by Pelvic Tumour and by Convulsions, similar in some respects to two other cases he had brought forward, which were recorded in the Society's Transactions, vol. iv., p. 129, and vol. xiv., p. 227. The patient, aged twenty-four, short and stout, primipara, when nearly advanced to full time, slipped and fell forwards. Labour pains commenced next day. On examination, the posterior wall of the vagina was pushed forward by a tumour about the size of a large orange, having apparently a smaller mass attached to it. It was hard, but yielding to the touch, non-fluctuating. The fœtal head was arrested at the brim. Several ineffectual attempts were made to push the tumour above the brim. Turning was rejected, as the liquor amnii had escaped. Labour went on slowly for four days, when convulsions occurred. Chloroform was administered by Mr. Bailey, and the long forceps applied by Dr. Wells, but without avail. Craniotomy was then performed, and after considerable difficulty delivery was accomplished. The tumour, during the passage of the child's head and body, had become forced up above the pelvic brim, and could no longer be felt. It was probably a fibroid attached to the posterior surface of the uterus by a pedicle sufficiently long to enable it to drop into the pelvic cavity. The chloroform acted admirably in arresting the convulsions and keeping the patient quiet. There was no albumen in the urine. The patient made a good recovery.—Dr. MURRAY inquired if the tumour had been removed subsequently.—Dr. CUMBERBATCH asked what was the supposed therapeutic value of lemon-juice in convulsions.

The annual meeting for the election of officers, &c., then commenced. Dr. George Roper and Dr. J. C. Hayes, the scrutineers of the ballot, declared that the list of names recommended by the Council had been unanimously approved of. The treasurer's (Dr. Murray's) report, which showed that the finances were in a flourishing condition, was read and adopted. The report of the honorary librarian (Dr. Aveling) was also read and adopted. The President then delivered his annual address. Votes of thanks were accorded to the retiring officers. Dr. Hicks proposed and Dr. Routh seconded in most complimentary terms a special vote of thanks to the retiring President, which was carried by acclamation.

CLINICAL SOCIETY OF LONDON.

THE meeting of the Clinical Society was held on Friday, the 22nd instant, Mr. Callender in the chair. As our readers are aware, the newly-elected president, Sir William Jenner, was to have delivered his address at this meeting, had he not been prevented by his attendance at Osborne. A telegram was read from him announcing his regret at his enforced absence. The evening was mainly devoted to surgical topics, and the cases and discussions raised some important questions of surgical pathology and treatment.

Mr. PRESCOTT HEWETT exhibited a patient suffering from Chronic Periostitis of the Humerus, on whom he had operated some time before. The patient, whose present age is forty-six, and who is a railway porter, has always enjoyed good health. He has had a venereal sore, without secondary symptoms, but no rheumatism, accident, or blow, to account for the disease. About six years ago he began to suffer from intense pain about the upper part of the humerus and shoulder, which was followed by the gradual formation of a swelling over the middle third of the humerus. Two years later he came under the notice of Mr. Hewett, who found that the upper part of the humerus was enlarged and thickened, and that over the situation of the insertion of the deltoid, and firmly connected with the bone, was a hard ivory-like mass, which appeared to extend into the substance of the muscle. Mr. Hewett thought that the case was one of chronic periostitis infiltration of the sheath of the deltoid. The patient was treated with large doses of iodide of potassium, the sole effect of which seemed to be some relief of the pain, which was very intense at intervals. After some months he was admitted into St. George's Hospital, and a longitudinal incision made over the swelling and carried down to the bone, through the thickened periosteum. The lump over the insertion of the deltoid was found to be very hard, resembling fibro-cartilage. The pain was completely relieved, and the mass to a great extent subsided. At present, three years after the operation, there remains some thickening about the bone, for the most part lateral, and occupying chiefly the insertion of the deltoid. The movements about the shoulder are imperfect, only some rotation being possible, but this is, to a great extent, compensated by the mobility of the scapula. There is also stiffness about the elbow, but no true anchylosis, and the patient has continued at his occupation, and can lift nearly a hundredweight with that arm. Nor is there any pain.—Mr. CALLENDER referred to the fact, insisted on by the late Mr. Stanley, that great relief is afforded in cases of inflammation about the long bones by a simple longitudinal incision down to the bone, the effect being due to the relief of tension of the fibrous periosteum. With regard to the growth of exostoses, Mr. Callender referred to some in-

vestigations made by himself a few years ago into their mode of growth. He found that they generally grew from the ridges into which important muscles are inserted, such as those about the upper part of the humerus and those which run down to the lower end of the femur. His investigation was confined to the examination of specimens in the museums. He thought that the probable explanation lay in a strain or tear of the insertion of one of the muscles, leading to irritation and subsequent new growth. As to the cause of the immobility of the shoulder- and elbow-joints in this case, he inquired what was Mr. Hewett's opinion, and whether any advantage would be gained by a forcible breaking down of the adhesions.—Mr. HOLMES said that he had been much interested in the case, as a problem in prognosis, when the man was in St. George's, as other surgeons had diagnosed it as one of malignant disease. He had seen other cases of the same kind in children and young adults, especially at the lower end of the femur, in which amputation had been contemplated under the impression, the growth being exuberant, that it was malignant; and a case was on record in the Pathological Transactions in which Mr. South had excised for syphilitic periostitis. The conclusion was that the surgeon should not be in too great a hurry to amputate for a growth beneath the periosteum in these situations.—Dr. BUZZARD asked what Mr. Hewett called a *large* dose of iodide of potassium, and stated that thirty or forty grain doses would relieve the pain of syphilitic periostitis, when five or ten grains were utterly useless.—Mr. BARWELL related a case in which rupture of the ligamentum patellæ close to the tibia had occurred to a young man by a fall from his horse whilst hunting. Under treatment he recovered sufficiently to go about; but eighteen months later he came again to Mr. Barwell with the commencement of a large exostosis at the insertion of the ligamentum patellæ into the tubercle of the tibia, which had gone on increasing ever since till the patient was last seen, ten or eleven months ago.—Mr. CALLENDER mentioned a somewhat similar case, where a gentleman who had strained his arm whilst hunting had a subsequent swelling at the insertion of the deltoid. When seen by him the whole arm was swollen and œdematous, and it appeared as if an attack of diffused inflammation and suppuration was about to occur. Under rest and iodide of potassium it completely subsided. The patient said that he often had similar attacks running the same course.—Mr. PRESCOTT HEWETT, in reply, stated that he had broken down the adhesions in several cases of stiff elbow-joints, and he did not think he should ever do it again, as he has never seen it succeed; and others had had a similar experience. He had had less experience of the shoulder, but it was not more favourable. The perfect use of the shoulder by the movement of the scapula precluded the idea of operation in the present case. The dose of iodide of potassium employed had been thirty grains three times a day, which he considered a fair dose.

Mr. TIMOTHY HOLMES gave an account of a case of Subperiosteal Excision of the Os Calcis, the subject of which was shown at the last meeting. Mr. Holmes referred to Ollier's experiments and operations, and expressed surprise that the method recommended in his works had not gained more attention and more extended trial on the part of London surgeons. In 1869 Mr. Holmes recorded in the *Practitioner* a case of subperiosteal excision of the elbow, and Mr. Stokes of Dublin had recorded another; but the results had not been so good as those obtained by the ordinary method. The shoulder-joint seemed more likely to be appropriate for the operation, but he had not tried it. In the present case the result had also been unfavourable. The patient was a boy, fourteen years of age, who for about a year was treated by the expectant method, and then with potassa cum calce. No good, however, resulting from the treatment, the operation was done on January 31st, 1874, by Ollier's method, following closely his directions (which were described in detail by Mr. Holmes). The operation was greatly facilitated by the use of the elastic bandage, and Mr. Holmes defended Esmarch's claim to its introduction into surgical practice. The chief difficulty in the operation consisted in rasping away the periosteum from the lower surface of the bone. After removal, the bone was found to be diseased throughout, and deeply ulcerated in places; only a few shreds of periosteum had been left on it in the operation. Much inflammation followed the operation, and the temperature was not normal for a fortnight; afterwards there was much indolent swelling, and it was a long time before the foot could be used. He is still unable to stand well, the ankle-joint and the transverse tarsal joint are anchylosed, and the tendo Achillis is stiff. The result, in fact, is not nearly so good as that by the ordinary method. The objects of the subperiosteal method were: first, the regeneration of bone, which had failed in the present case, probably from the amount of violence necessary to detach the periosteum causing it to slough; and, secondly, the preservation of the tendons by operating inside the periosteum and their attachments, which had also failed. By the ordinary method the action of the tendo Achillis in pointing the foot is usually preserved, and Mr. Holmes had had cases in which the patient could hop and dance three years after the operation. Hence the practical difficulties would seem to outweigh the theoretical advantages. The recorded successful cures were for the most part cases of removal of sequestra.—Mr. BARWELL opened the discussion by referring to a case by Mr. Croft, in the Transactions of the Society, of subperiosteal excision of the knee-joint by Sayre's method, which was very successful, although he (Mr. Barwell) thought the success was not due to the method adopted. He himself had a case in which the operation was done by Mr. Sayre himself, in which no regeneration of the bone occurred, and there was as much shortening as usual. In another case, one of excision of the elbow, anchylosis occurred before the external wound had healed. Excision of the os calcis by the usual method was, on the whole, a successful operation, and, as a rule, there is no anchylosis; and possibly the bad result in Mr. Holmes's case was due to the suppurating cavity formed by the periosteum. He suggested that perhaps the proper method would be to bring the surfaces of the periosteum in contact.—Mr. WARRINGTON HAWARD had once done subperiosteal excision of the elbow-joint in 1871, on a girl eight years old, who had extensive disease, which reached some distance above the joint. He tried to save the periosteum, but found it very difficult and tedious. A large piece of the humerus also required removal, and it was doubtful whether the arm would be of any use. The subsequent inflammation was not excessive, and although the arm was useless for a long time after, she can now use the arm well, and has greater mobility in it than in the other arm. He thought that if the method were applicable to any case it was to those in which much bone had to be removed, as in some cases an excess of bone is formed and hinders movement.—Mr. CALLENDER agreed with Mr. Holmes that good results were not likely to follow from this method in the elbow, because in many cases the bone is carious and the periosteum disintegrated and unable to re-form bone. Moreover, only a small portion of the lower end of the humerus is covered by periosteum, the remainder being covered by the articular cartilage. With regard to Esmarch's bandage, he believed that the only method in any respect similar which had been previously employed was that used by Mr. Hilton at Guy's Hospital, of bandaging the limb with rollers.—Mr. HOLMES thought that Sayre's method of operation on the hip was quite unjustifiable, as there can be no advantage in excising as low down as the insertion of the gluteus medius in order to save the periosteum. With regard to the elbow, although there is but little periosteum on the articular end of the humerus, there is a good deal on the olecranon process, which often reproduces a great deal of bone, which forms a projection which prevents the straightening of the arm. His conclusion was that for operations on the elbow and os calcis there is no advantage in the subperiosteal method.

Dr. THOROWGOOD read an account of a very interesting case observed by himself and Mr. Bywater Vernon of Optic Neuritis, with complete loss of vision, followed by recovery under treatment. The patient was a girl eight years of age, who was first seen as an out-patient at the West London Hospital on Oct. 13th. Five weeks previously she had suffered from pain in the lower part of the back consequent on a blow, then from pain in the back of the neck and tenderness over the cervical spine, with some tumidity. A month later she complained of a "fog" before her eyes, and on Oct. 16th it was found that the sight of the left eye was lost, and that of the right a day or two later. On Oct. 23rd she was admitted to the hospital, and on the 24th Mr. Vernon found that there was bare perception of light with

either eye, and the pupils were dilated and fixed. With the ophthalmoscope the veins were found to be engorged, and the fundus oculi pale; the optic discs were swollen, with irregular outline; there were no hæmorrhages. Leeches were ordered to the temple, and two grains of mercury-with-chalk every three hours. On the 30th she could see objects between her and the light. On Nov. 3rd the outline of the right optic disc was found to be obscured and hardly visible, the fundus of an ashy-grey colour; the left disc obscure, the veins congested, and the surface apparently covered with new vessels. On the 5th she could see the fingers, and on the 7th could find her way about the ward. On the 22nd the optic discs were seen to be defined, but pale. She was able to read on Dec. 7th, and on the 27th could see well, and read with comfort. She is now in good health, the vision normal in the left eye, but rather below normal in the right; the optic discs are pale, the veins full, and the arteries small. The treatment adopted in addition to that above-mentioned consisted in blistering and the administration of solution of perchloride of mercury, iodide of potassium, and solution of strychnia. The authors remarked that the ophthalmoscopic appearances were such as to lead them to consider the case one of true optic neuritis, and not merely one of *stauungs-papillæ* or "choked disc." As to the cause of the disease, they at first thought that it was probably due to disease of the upper part of the cord from inflammation about the spine. After discussing the pathology of these cases, they stated their belief that it probably resulted from a slowly-extending basic meningitis involving the optic nerves. The case showed the value of mercury in brain disease.

The meeting then adjourned.

MEDICAL MICROSCOPICAL SOCIETY.

THE annual general meeting was held on January 15th, the President, Mr. Jabez Hogg, in the chair. The first business of the meeting was the election of officers for the ensuing year, after which the President proceeded to deliver his annual address. After a few words of congratulation on the present status of the Society, its financial condition, and the good work accomplished during the past year—which, he thought, had been done with a thoroughness and an exactness that would become a precedent,—and a brief allusion to the loss sustained by the death of Mr. Edward Snell, late of Stepney, Mr. Hogg stated that Mr. Needham had repeatedly urged in committee the expediency of publishing Transactions. This question, he was glad to say, had been disposed of by the unanimous voice of the Society, and it was at length decided to issue a volume of "Proceedings." Although it was understood to give the proposal a trial, he had no doubt of the success of this experiment, and that henceforth the Transactions of the Society would become "a year-book of practical histology." The value of investigating many points in pathological and physiological anatomy was then dwelt upon; for even the size, form, and structure of the red blood-corpuscle were not yet accurately defined, and, in medical jurisprudence, we could not positively determine the difference between the blood of man and that of the lower animals. There were also the surroundings of those mysterious zymotic diseases still undefined, in spite of all the microscopical power which modern ingenuity has brought to bear upon them. The life history of those incomprehensible organisms (schizomycetes), said to produce typhoid, variola, and septicæmia, should be, if possible, worked out. Professor Heiberg, of Norway, has made some advance in preparing the way for a better understanding of the action of the morbific power in pyæmia, for he has detected bacteria in the solid organs of the body and at the actual seat of the disease. The kidneys and tubules of patients examined by him were plugged by an amorphous granular material, which, when properly examined with a power of 600 diameters, proved to be a mass of schizomycetes. In the arteries going to secondary deposits and in the areolar tissue around them, in pyæmia, similar organisms were seen. This is a step in the right direction, and points the way to further discoveries. The Norwegian professor, it appears, attaches too much importance to the form or species of bacteria. He believes the spherical-shaped bodies (B. punctum) are the agents of the specific poison in pyæmia, but on careful examination it will be seen that if a section of recent disease be moistened with distilled water and placed under a power of 600 diameters, both spherical and rod-shaped bodies rapidly move about over the field. The same bodies will be found in blood-serum, flesh-water, &c., after standing by for a few hours in a warm room, but how or by what peculiar agency they are produced is inexplicable. The President brought his discourse to a close with a review of the papers read before the Society during the past year, after which a vote of thanks was proposed by Mr. Charles White to the President for his address, and also to the secretaries for their zeal and exertions on behalf of the Society; and the scrutineers announced the election of officers for the ensuing session.

ROYAL COLLEGE OF PHYSICIANS.

A MEETING of the College of Physicians was held on Thursday last. The following gentlemen were admitted members:—Dr. Elliott (Hull), Dr. Leech (Manchester), Dr. Gowers (London), Dr. Mackay (Birmingham), Dr. Shelton (London), Dr. Dukes (Rugby), Dr. Coupland (Kensington), Dr. Hunt (Edgbaston), and Dr. Evershed (London).

A communication was received from the Apothecaries' Company relative to the Conjoint Scheme, and a resolution was passed expressing a desire on the part of the College that the Society of Apothecaries might nominate four representatives upon the Committee of Reference, so that the "scheme" might be agreed upon by all the English licensing bodies, a copy of the resolutions to be sent to the College of Surgeons.

The following Fellows were elected to fill vacancies in the Council:—Dr. Guy, Dr. Monro, Dr. Martin, Dr. Pavy, and Dr. Wilson Fox.

The following request, moved by Dr. Quain, was unanimously acceded to:—"To ask the sanction of the College to certain windows of the buildings being glazed with plate glass, and to a blank window under the portico being replaced by a niche corresponding to the niche at either side of the window. The expense to be defrayed from a portion of the surplus of the fund subscribed by the Fellows for the repairs of the College."

AN APPEAL.

To the Editor of THE LANCET.

SIR,—Permit me to call your attention and that of the profession to the recent death of Mr. Davenport, of Bromsgrove, Worcestershire, and to the melancholy position in which his wife and family are placed by his sudden and untimely removal. Mr. Davenport, who was parochial surgeon and medical officer of health for Bromsgrove, where he had practised for twenty years, was stricken down by erysipelas of the head, and after a few days' illness died, leaving a *widow and eleven children* unprovided for, except in so far as a small life assurance policy and the sale of the practice can be considered a provision. I trust that the appeal which I make through your columns will induce some of the affluent members of our profession to lend a helping hand to relieve the necessities of a family thus suddenly reduced from comfort to poverty by the removal of one who lost his life in the active discharge of his professional duties. I hereby return thanks to Dr. Heslop and to Mr. O. Pemberton who have respectively given 5 and 2 guineas to the "Davenport" Fund, and I shall be happy to take charge of any further donations.

I am, Sir, yours respectfully,

JAMES F. WEST, F.R.C.S.,
Senior Surgeon to the Queen's Hospital.

Hagley-road, Birmingham, Jan. 25th, 1875.

THE LANCET.

LONDON: SATURDAY, JANUARY 30, 1875.

THE question of the relative safety of different anæsthetic agents, upon which we have lately been addressed by several correspondents, is one which demands, and cannot fail to receive, the closest attention of operating surgeons. It is true that in London the office of administering anæsthetics has become almost a special branch of the profession, and that those who follow this branch are accustomed to consider that its responsibilities rest chiefly upon themselves. In the country, however, such a division of labour is not recognised, and could hardly be rendered practicable; while neither in town nor country would it be possible for an operator to devote himself to his duties with singleness of purpose, unless he were well assured that every precaution had been taken for the safety of his patient. Apart altogether from the eventual responsibilities which may be involved, there are few positions more embarrassing than those in which danger from an anæsthetic is threatened in the midst of an operation, and there are none more painful than those in which this danger passes into death. In the great majority of cases the fatal event has happened in the course of some proceeding which of itself was almost free from risk; and the accidental destruction of an apparently sound life in the course of the extraction of a tooth, or of the evulsion of a toe-nail, or of the rectification of a squint, is an event to which no right-minded man can be contributory without subsequent painful self-examination and self-reproach. Until a comparatively recent period, the self-examination was easy and the self-reproach was slight. It was held that all anæsthetic agents were about equally dangerous, and that in a certain percentage or permillage of cases death would follow the administration of any of them. The choice between ether, and chloroform, and bichloride of methylene, was supposed to be one of habit and convenience only; and the administrator who had measured his doses, who had watched the pulse and the respiration, who had provided a galvanic battery in case it should be required, and who commenced artificial respiration as soon as threatening symptoms appeared, was held to have done his duty in every respect. The jury, which recorded his precautions, pronounced at the same time his plenary absolution.

During the last few years, however, these comfortable convictions have been somewhat rudely dispelled. The Americans, whom it is almost superfluous to characterise as a shrewd and practical people, have been loudly proclaiming that ether is absolutely safe, and that, being also perfectly efficient, it ought to supersede all other anæsthetics. They admit, of course, that you may kill a patient by excluding oxygen from his lungs for a sufficient time, and that he will not be killed the less certainly because the instrument or means of exclusion is called an ether inhaler; but they say that, given an occasional chestful of air, the destruction of life by the inhalation of ether vapour is simply impossible, and that the few deaths which have been attributed to ether are all traceable, when fairly inquired into, either to the nerve shock of the operation or to simple asphyxia. In the United States, or at least in some of the more enlightened of them, the use of chloroform and its congeners has been abandoned, because members of the profession feel that they would have no valid defence if an accident from one of these were to occur under their management. They would be driven to admit, or they would hear others testify, that chloroform and its allies are sometimes fatal, while against ether no such charge can be substantiated; and they would have no answer to the inquiry—Why did you expose your patient to a risk which is as well known as it is easily avoided? On the simple ground, therefore, of a natural shrinking from uncalled-for homicide, a very large majority of American surgeons use ether as their sole anæsthetic; and their testimony fully confirms that which has recently been given in our columns by Mr. POLLOCK, Mr. BRUDENELL CARTER, and Mr. WARRINGTON HAWARD, to the effect that ether is perfectly trustworthy and available for all surgical purposes. To Mr. HAWARD, indeed, belongs the credit of having practically reintroduced it into English surgery; for his paper read before the Royal Medical and Chirurgical Society, and his practice as administrator at St. George's Hospital, take precedence, by nearly a year, of the very emphatic warning which Dr. JOY JEFFRIES addressed to his colleagues of the International Congress of Ophthalmology, and to which we gave prominence at the time in our columns. St. George's Hospital, therefore, has an experience of nearly four years during which ether has been used there as the ordinary and prevailing anæsthetic, and during which it has been amply proved to be speedy, convenient, and effectual for all purposes. The objections which were once urged against its employment, and which led Sir JAMES SIMPSON to the utilisation of chloroform, were probably largely due to faulty methods of preparation, and have been set aside by the progress of manufacturing chemistry.

The dangers of anæsthesia, so far as we understand them, are death beginning at the lungs, and death beginning at the heart. When a rabbit or other small animal is killed by chloroform, its death begins at the lungs. It perishes by asphyxia; and, after apparent death, which would pass into real death save for the aid of art, it may, as Dr. RICHARDSON has shown, be easily resuscitated. The same condition has more than once been produced in the human subject, and ZIEMSSEN and others have recorded cases in which, by faradisation of the phrenic nerve, or by other methods of maintaining respiration, life has been restored rather than preserved. We think it probable that death beginning at the lungs might be occasioned by ether, and that, if improperly treated, it might become death real and irretrievable. All such cases, however, would probably be remediable if taken in time; and would require nothing but the methodical conduct of artificial respiration. With chloroform and bichloride of methylene there is also the danger of death beginning at the heart, by a sudden paralysis over which the respiration exerts no influence; and it is probable that such cases are always fatal. From this risk it may, perhaps, be said that ether is wholly free; for there is a remarkable concurrence of testimony with regard to its power to sustain

the heart, and also, by maintaining dilatation of the capillaries, to prevent the heart from being overloaded by blood driven in from elsewhere. We should hesitate to admit with the Americans that ether is absolutely safe; but we are prepared to believe that any small dangers which may attend upon it are under the control of vigilance and good management. With regard to chloroform the same cannot be said; and, as long as its employment is continued, it will continue to claim its occasional victims. It is surely incumbent upon every surgeon to guard the life of his patients, and to keep himself in the right, by the systematic employment of the anæsthetic which, so far as knowledge now extends, is at once as effectual as any other and more safe.

IT will be well at the present moment briefly to glance at some of the considerations which, in the opinion of the profession, render hospitals for infectious diseases a necessary part of a proper sanitary organisation, and which, it may be presumed, influenced the Legislature in making such provision for their establishment by local authorities as is found in Sect. 37 of the Sanitary Act of 1866. The primary consideration in the establishment of these hospitals is the limitation of the spread of infectious diseases by the isolation of the sick. Isolation is the only efficient means we possess of controlling the spread of infectious disease, except small-pox, and perhaps enteric fever; and so long as vaccination is not universal and good, and the sanitary condition of towns and villages as to drainage and filth-disposal is such as it too commonly is, isolation must be an essential element in the effective limitation of both diseases. The influence of isolation in checking the spread of infectious diseases is no new doctrine. HAYGARTH and WITHERING in 1793 (to go no further back) conclusively showed how isolation would check small-pox and scarlet fever. HAYGARTH'S rules for stopping the progress of small-pox by isolation (vaccination not then being known), and WITHERING'S application of these rules to scarlet fever, pretty well exhaust the subject. But only since 1866 has it become possible to obtain anything like a general recognition of the value of these rules, and it is feared that some years must still elapse before any such general provision of hospital accommodation for infectious diseases by sanitary authorities, and large use of such accommodation, is made, as will permit the effectual stoppage of these maladies when they show themselves.

Although the Sanitary Act of 1866 has been but a short time in force, and comparatively few sanitary authorities have given effect to its provisions regarding hospital accommodation, important evidence is forthcoming of the great influence of such accommodation in checking the progress of infectious disease. According to Dr. BUCHANAN, there would appear to be little doubt that during the still unexhausted epidemic of small-pox the lengthened duration of the disease in Birmingham, as compared with London and Coventry, was largely due to the smaller amount of hospital accommodation available for the sick in the former place. In Coventry the epidemic ceased after six quarters' prevalence, and in London after seven quarters' prevalence. The hospital accommodation provided in the former place was in the ratio of 7¼ beds per 10,000 inhabitants; in the latter place, 8 beds per 10,000. In Birmingham, where at the time of Dr. BUCHANAN'S visit the number of beds was somewhat less than 3 per 10,000 inhabitants, the disease, after persisting upwards of two years, still continues. Certain facts recorded by Dr. BLAXALL are to the same purpose as the preceding. In Plymouth small-pox was epidemic twelve months; fourteen beds were first provided to meet the epidemic, and subsequently at intervals other small numbers. In Devonport the disease prevailed five months; when it first appeared, a hospital containing a hundred beds was opened. In fact, where early and large provision was made for isolation, there the progress of the disease was most markedly controlled.

If permanent provision were made for the isolation of infectious diseases by all sanitary authorities, there can be no doubt, from the experience now available, that a very considerable diminution of infectious diseases might be effected, and the epidemic extension of these maladies held very largely in check. If provision be not made beforehand it fails at the moment when it is most needed and when it is most valuable—namely, at the beginning of an outbreak, when it is possible to isolate the earliest cases, and so stifle it. The very essence of successful limitation is the weeding out of the earlier cases of an infectious disease among those classes of the population where its dissemination is greatest, and especially under the conditions where the sanitary authority can compel removal of the sick. In proportion as these objects are successfully promoted will the danger to a community from infectious diseases be held in check. These diseases are mainly fostered among the sublet and crowded houses of the poorer classes. In these houses isolation is impossible, and the facilities for the propagation of the disease by the intercommunication of families and neighbours are of the greatest. Any attempt to limit the dissemination of infection under such circumstances must necessarily be futile. Here, also, is the true source of infection of all grades of society. St. Giles and St. James are linked inextricably together by a bond of infection. Through every kind of intermediate service—tradesmen, household servants, and all the various hangers-on of the wealthy—the transmission of the insidious mischief takes place. There is but one true method of breaking this morbific bond—namely, by rooting each case of infection out of its foster-bed as it occurs. This is the function of the hospital, where all the conditions of transmission are altered. There casual intercommunication of neighbours is done away with, and the patient is put under such circumstances that the infection of his disease is not stored up or aggravated by foul surroundings. In fact, infection is placed there under almost absolute control; and, as we have recently seen at Hampstead, a great small-pox colony, so to speak, with several hundreds of population, may be created in the midst of a thickly-populated metropolitan suburb and maintained there for months without extension of mischief to neighbouring houses.

The true policy of infectious-disease hospitals, as has been wisely seen by the Legislature, is to multiply them, so that they may become part and parcel of the ordinary local sanitary organisations, and the people become familiarised with them and their object. Contagion and infection are now known to be not the mysterious properties, alarming

because mysterious, that they were once supposed to be. We now know them to be properties acting under well-defined conditions which can be controlled with almost absolute certainty. Such control is best effected and promoted, so far as sanitary authorities are concerned, by providing means of isolation.

A condition of such isolation is that it shall not be harmful to the patient. It is almost inconceivable that hospital arrangements should be made in the present day which would be detrimental to the sick. It has, however, been asserted that in the Hampstead Hospital, during the late epidemic of small-pox, the chance of death to the patient "was more than doubled." This statement is founded upon some casual figures, which it is assumed show that "the usual mortality" of small-pox patients treated in their own houses is 9 per cent.; whereas the mortality among those treated in the Hampstead Hospital was 18 per cent. There is probably no disease of which we have more accurate information as to mortality under different conditions than small-pox. MARSON tells us that patients admitted into the Small-pox Hospital, which he has for so many years superintended, die at the rate of 50 per cent. from confluent small-pox, 8 per cent. from semi-confluent, and 4 per cent. from the distinct forms of the disease; and his experience is confirmed by probably all observers in the temperate zone. The average mortality at all ages at the Small-pox Hospital has for many years been 19 per cent. SEATON informs us, as the result of the extensive inquiry made by the Epidemiological Society a few years back, that the mortality of small-pox at all ages among patients "treated at their own houses" (to use the Hampstead Committees' phrase) is 19 per cent. The mortality at all ages in the Hampstead Hospital, according to the Hampstead Committees, was 18 per cent.—a fact which proves conclusively the admirable manner in which that hospital was conducted under the exigencies of a great epidemic. In reality this fact, taken in conjunction with the fact that it has not been found practicable to substantiate any case of diffusion of disease from the hospital such as has been popularly supposed, must go far to remove groundless fears of the near contiguity of infectious-disease hospitals to inhabited houses, and to promote their multiplication in readily accessible places.

THE distinction between, or the identity of, croup and diphtheria has been for many years a subject of frequent and sometimes warm discussion; and the relation between the two diseases cannot, even now, be considered as withdrawn, by anything like a consensus of opinion, from the region of controversy. The subject is one of equal interest to the pathologist and the practitioner: to the one the question in dispute involves that of the diverse origin of specific processes so nearly identical in the two cases; while to the other it contains that of the origin and spread of a common disease, whether by contagion or otherwise, and the conclusion affects immediately the mode of treating and managing the complaint.

It need hardly be said that it is concerning true membranous croup that the discussion has arisen. Is this disease identical with the laryngeal diphtheria to which it has so many points of resemblance?—or are the points of difference between the two diseases, in etiology and pathology, so considerable and so defined as to justify their separation as distinct maladies? From the time of the clinical distinction of diphtheria—for which we are indebted to the sagacity of BRETONNEAU,—the French school of physicians has, as a rule, urged strongly the identity of the two affections; and TROUSSEAU has ably supported that view. In Germany opinion has been more divided; but in that country, both during the remarkable discussions on the subject which took place at Berlin and Dresden in 1872, and in various publications before and since that time, the balance of expressed authority has inclined to the opinion that the diseases are distinct. In this country, on the whole, the same view has received most general acceptance. Our readers will, however, have noted with interest the recent coincident expression in our columns of the opposite opinion, in the most precise and emphatic manner, by two physicians whose verdict must, on this subject, be allowed to have greater weight than that of any others—Sir WILLIAM JENNER and Dr. GEORGE JOHNSON. By both, the diphtheritic nature of true croup is strongly urged, and on grounds which must be admitted to be both forcible and clear.

Those who have advocated the distinctness of the two affections have urged, as grounds for the separation, their specific morbid anatomy and definite clinical course. Chemical, microscopic, and anatomical distinctions have been found in the membranous production which marks the inflammation in the two diseases. The membrane has been said to consist, in one, of a deposit of fibrin; in the other, of an albuminous material. In the one only pus-cells embedded in the meshes of the fibrinous material are described; while the other is said to be made up of epithelial cells which have undergone a peculiar degeneration, of which WAGNER has given an elaborate description. But, unfortunately, authorities are by no means agreed which of the distinctive characters correspond to each disease. The histological characters which WAGNER and SENATOR give to diphtheria, NASSILOFF and BOLDYREW, who equally deny the identity of the affections, assign to croup. The only point on which all are agreed, who advocate the distinction between the two diseases, is, that the affection of the mucous membrane is more profound in diphtheria than in croup, the morbid process involving its substance instead of its surface; and leading as a consequence to more marked vascular changes, plugging of the vessels with masses of white blood-corpuscles, and small hæmorrhages into the tissue. But it is obvious that this distinction is one rather of degree than of specific difference; and cases are not rare in which, as in one described by BOLDYREW, the same difference may be found between different portions of the exudation in the same case; and other writers on the same side—WEST in this country, and HASSENSTEIN in Germany—have to confess that between the slighter attacks of diphtheria and croup no specific anatomical distinction can be made.

Pathological anatomy thus, it must be confessed, fails to establish any constant differences between the two affections. How far do clinical characters bear out the alleged distinction? The points of difference which have been relied

on are—the origin of the disease, in the one case by contagion, in the other by the ordinary causes of simple inflammation; the extension of the diphtheria by infection to others; the circumstance that in laryngeal diphtheria several days of illness commonly precede the laryngeal symptoms; and that albumen in that affection is commonly present in the urine. But, as Sir WM. JENNER so clearly shows, in practical experience these diagnostic symptoms break down. Cases of undoubted laryngeal diphtheria may arise from an influence which will in another person produce a simple inflammation. The majority of the cases of sporadic diphtheria are referred to cold as their cause. This circumstance destroys all the distinctive value which SENATOR assigns to the fact that a more violent irritant—as a scalding fluid—may be the exciting cause of a croupous inflammation. Any constitutional condition which determines the occurrence of a diphtheritic inflammation after exposure to cold may equally determine the same result on the application of any other simple irritant. Moreover, cases, apparently, in all other conditions of origin and course, of simple croup, may have albumen in the urine; and to assume that all the cases in which this symptom is present are instances of diphtheria is, it is hardly necessary to say, simply to beg the question. Preceding ill health may be more frequent in diphtheria than in croup, but instances of cases of pharyngeal diphtheria, in which the false membrane was one of the earliest symptoms of the disease, must have come to the notice of most practitioners.

Thus neither any one of these symptoms nor any combination of them can be relied on as affording grounds for separating the two diseases. Nor is the age at which croup occurs any reason for their separation. Age exercises a marked effect in modifying the course of many diseases even where it does not determine their occurrence. A difference in course is not, however, held to be a sufficient reason for inferring a specific difference in nature. The larynx manifests a remarkable susceptibility to suffer in early life. Catarrhal laryngitis is a much less frequent and less severe disease in the adult than in the child. Laryngismus stridulus is confined to the infant. There is thus nothing unparalleled in the fact that diphtheritic inflammation is in the child a much more frequent laryngeal trouble than it is in the adult.

It would be a decided gain if the word "croup" could be abolished altogether from scientific description and debate, or, if employed, be confined to a strictly symptomatic use, as "apoplexy" is now applied to a definite symptom irrespective of its cause. It would be better perhaps to get rid of the term altogether, but it is hard, if not impossible, to discard terms which have become firmly fixed in the popular pathology. Much confusion has, however, arisen from its use. As we have said, the pathological anatomy of catarrhal laryngitis is in some standard treatises included under that of croup; while some authors have, on the other hand, described by the same term cases of unquestionable diphtheria, as in the instances in which false membrane extends into the pharynx. "Simple," "purulent," and "membranous" laryngitis are names sufficient to include with precision all forms of inflammation of the larynx, and the discussion of the nature of the last-named affection could be carried on to a clearer issue.

Annotations.

"Ne quid nimis."

PRACTICE OF MIDWIFERY BY UNQUALIFIED WOMEN.

THE facts published in our last number with reference to the outbreak of puerperal fever in the neighbourhood of Battersea-park, together with those made public at an inquest recently held at Coventry, point out the urgent need of dealing with the question of the practice of midwifery by unqualified persons. There is a large number of such persons, chiefly women, scattered throughout England and Wales who attend annually a very considerable number of cases of labour among the poorer classes. Some of these women have undergone a certain amount of training, such as attendance for a short period—four or five weeks—at a lying-in hospital. During this period each one is required to be present during the delivery of a certain number of women, and to deliver one woman before a certificate is granted her. A woman who has obtained this certificate sets up on her own account, and calls herself "certificated midwife." Many such women are attached to our lying-in hospitals and to the maternities connected with our general hospitals, and in so far they practise under the supervision and control of an obstetric physician or surgeon. But they attend cases also on their own account, and in this part of their practice are responsible to no one for their conduct. There is another class of midwives—and this forms a majority—composed of women who have had no training of any kind whatever. "Mrs. Gamp" is a typical specimen of this class. It is hardly necessary to say how utterly unfit both those who are "certificated" and those who are not certificated are for the conduct of a labour presenting the least difficulty. Under these circumstances, it is to be hoped that during the coming session of Parliament attention will be directed to this evil, and that a scheme will be drawn up and legalised for the training, licensing, and controlling of midwives. It should be made illegal to practise midwifery unless licensed to do so. Licences should be granted by responsible bodies only, such as one or more of our present medical licensing bodies. No licence should be granted except after proper training and examination, and no woman who has obtained a licence should be allowed to practise except under supervision and control. The country is now divided into sanitary districts, and every midwife when she has obtained her licence should choose or have allotted to her a district in which to practise her art. She should be under the supervision of the medical officer of that district, and should not be allowed to practise in any other district than that chosen by or allotted to her. Should she wish to change her district, she should obtain a discharge from the medical officer of the district to which she has been attached. The medical officer of health should have power to suspend temporarily any midwife in his district for neglect, misconduct, or in case a contagious disease has appeared amongst her patients. If such a scheme were adopted we should have, intellectually and morally, better educated midwives; and not only should we have better midwives, but by placing them under such supervision we should render impossible such terrible disasters as have lately occurred.

QUIET.

IT is little short of heart-breaking to think that for the sake of a few pounds the inhabitants of the richest city in the world are to go on suffering all the distractions of the ruthless noise and rattle of our streets, when comparative quiet can be had without difficulty. We sincerely hope that

the ratepayers of London will fight in earnest for the sake of this great boon, which vestrymen are inclined to withhold from them. There is no stronger argument for the remodeling of our metropolitan government than the present state of our thoroughfares. There is hardly one of our principal streets which is paved in a uniform manner; and the unfortunate horses, in their frequent changes from wood to granite, from granite to macadam, and from macadam to asphalte, naturally come to grief, as human beings come to grief when practical jokes in the way of unexpected transitions are played off upon them. We often think that the sensation experienced by one of Pickford's heavy horses going full trot, when it suddenly steps off the granite on to the wood or asphalte, must be not unlike that which we feel when a miscalculation lands us on the soft rug at the foot of the stairs one step sooner than we expected. It is absurd for us to insist on the benefit which quiet pavements would bring, not only to the invalid population, but to the intellectual population of London as well. It is hardly too much to say that there is no such thing as real rest where quietness is not attainable, and it is owing to the noisiness of London, as much as to anything else, that medical men are obliged to send their patients out of town, when for every other reason they would be far safer for a time under the eye of a physician or surgeon. Let those who wish really to know what a boon is quiet pavement ask the patients and medical staff of Charing-cross Hospital, the street along one side of which has lately been paved with wood. The wards abutting on this wood-paved street are not like the same places, and to the patients and workers in them the transition is like that from Pandemonium to Elysium. A thoroughly healthy man may perhaps be able to disregard noise, and to work or sleep through the thundering of vans and cabs, as Charles XII. or Hannibal could sleep amidst the din of armies. Thoroughly robust men, however, are scarce in London, especially amongst brain-workers, and when once a man becomes conscious of the noise around him his life is hardly bearable. It is for this reason that many men are obliged, at great inconvenience, to live out of town, in order that they may ensure a night's rest to enable them to endure the fatigues of the day. The actual personal benefit which would accrue to each of the three million inhabitants of London ought to be more than sufficient reason for discarding at once and for ever macadam and granite. There are many other reasons, however, which should have weight. There can be no doubt that houses which are situated in streets with quiet pavement (wood or asphalte) would increase in value immensely. Take the example of Hereford-gardens at the upper end of Oxford-street. A year ago they were the noisiest private residences in London. Now they are among the quietest, and we should like to have the proprietor's opinion as to whether or no he grudges or his tenants grudge the extra rate. One great reason, as we have hinted above, why the business men of London rush to the outskirts is the noise. Let the noise cease, and it is not difficult to foresee a keen competition for central houses. Another good result of quiet paving would be that it would be no longer necessary to strew straw or tan opposite the houses of the sick, and thus not only would a great expense be saved to the friends of the sufferer, but the other inhabitants would be spared the annoyance of living close to what these strewn streets become in wet weather—veritable areas of damp dung. We feel certain that in the business thoroughfares quiet pavements will soon be adopted, but we trust they will not cease there. Quietness is much needed in the streets which are occupied by private and professional residences, and in which, owing to the height of the houses and the narrowness of the roadway, the noise is often terrific, the rumbling of a "growler" being magnified by reverberating echoes, so that conversation in the front rooms is hardly possible while there is a cab in the street.

We need not dilate on the manifest unfairness of taxing the private inhabitants for the paving of the business thoroughfares without at the same time taxing the business inhabitants in order that the private streets may enjoy peace and quietness. It is evident that vestries must be prepared to pave the whole of the parishes after one pattern, or else great discontent will be occasioned. It would be a nice calculation for an ingenious mathematician to determine the amount of force which is annually expended in London in overcoming friction, and what would be the money value of this force if diverted into other channels. What, for instance, would be the saving in horse-flesh and wear and tear of vehicles and harness if all our streets were paved with wood, and the tyres of our wheels were made of india-rubber? We hope before long to be furnished with data for answering so intricate a question. It is certain, however, that there is no lack of arguments, hygienic or financial, for at once acceding to what is the evident desire of the vast majority of the inhabitants of London.

EXPERIMENTATION ON ANIMALS.

FROM the influential character of the meeting which took place recently at the Royal Society for the Prevention of Cruelty to Animals, it is clear that Parliament will be called upon to deal with this subject, and that a Bill will be early introduced in the coming session to amend the law in regard to the practice of vivisection. We have little or nothing to add to that we have already advanced in an article that appeared on the 2nd inst. We then approached its consideration with a sense of responsibility, and an earnest desire to see the question taken up honestly and impartially, with a view to its being determined whether the limits of necessary and unnecessary vivisection could not be defined. No one can shut his eyes to the fact that there is an immense amount of physical suffering in the world, and that a large number of the discoveries in physiological and medical science, directly bearing on its removal or mitigation, have owed their origin to, or been in some way or other connected with, experiments on animals. We pointed out that apparently purposive acts in animals were often unattended by consciousness, and we urged that false inferences were very likely to be drawn, as they often have been drawn, by persons ignorant of physiology. We must object, therefore, to conclusions founded on *ex parte* statements, and supported by the names of men who, whatever their intellectual and social eminence, are not qualified to act as judges in the matter. It does not do to approach the consideration of this subject in a frame of mind excited by pictures of alleged cruelty. Statements are made in the memorial that cannot be justified, and the document is characterised by an exaggerated tone and an objectionable spirit. We stated that we had always been opposed to repetitions of experiments for the purpose of demonstrating what was already established, and we must say that we utterly discredit such statements as that young students actually repeat a whole catalogue of experiments, some of which they may have seen or about the nature and object of which they happen to have been instructed. We should have preferred, as a substitute for the action of this Society, that an impartial investigation of the subject by independent and properly qualified persons should have been undertaken as a preliminary step to, and as the basis of, any subsequent legislation; but we are prepared frankly to examine the merits of any honest attempt to guard the lower animals against

the abuse of man's power over them, and we think that we have already indicated some of the directions in which this attempt might be made. Why not have a commission appointed on the subject?

THE PROTECTION OF THE PUBLIC FROM CONTAGIOUS DISEASES.

ON Saturday last, a woman was charged at the Clerkenwell Police Court with conveying her son, then suffering from scarlet fever, in a cab to Charing-cross Hospital, and thence to the Fever Hospital in the Liverpool-road. The defendant pleaded ignorance as to the nature of the disease, and the magistrate reserved his decision. As, however, this is but one of many like cases that are frequently occurring in the metropolis, it is plain that some efficient means ought to be adopted to improve the ambulance service in each and every district, and also to make known to the general public where these conveyances may be obtained. We recorded some brief notes about ambulances last week, and might have added that, even where they exist, the difficulty of obtaining them is often considerable. Unlike the Metropolitan Fire Brigade, the ambulance staff seems to be never regularly on duty. As a rule, no horse or horses are attached to the establishment. The driver has in the first instance to be "dug out" from somewhere; he then proceeds very leisurely to hire a horse haphazard from a livery or cab stable, and, when he arrives for his sick freight, usually hints that, as the job is disagreeable or risky, it is necessary to fortify the spirits within by the exhibition of spirits from without. So that, even if but a moderate distance has to be traversed, what with red tape in way of orders &c., and the utter absence of anything like system as regards the ambulance department, the greater part of a day is spent in the removal of one patient. In point of fact, ambulance stations in London ought to be as well known as those of the Fire Brigade. Drivers, with horses and vehicles, should be constantly on duty, and the question of payment for services rendered can be decided by the vestry or sanitary authority on the merits of every case as it arises. Anyhow, it is far better that the local authorities should each in their own district have efficient machinery for the speedy removal of those suffering from infectious diseases, than continue to allow these persons, from ignorance or helplessness, to infect public conveyances, or to remain in their own houses until they have formed a nucleus of disease in the neighbourhood. We have established admirable hospitals for the reception and treatment of cases of epidemic disease, but the resulting benefits are diminished considerably as long as we neglect to provide for the safe and speedy removal of the sick to these institutions, and that without risk to the general community.

THE SPECTROSCOPIC PROPERTIES OF MUSCULAR FIBRE.

IT is well known to physicists that a network of fine lines, drawn on glass for instance, or a series of parallel fine lines, will furnish a spectrum of light, similar to that given by a prism. Ranvier has ascertained that muscular fibres, by virtue of their striation, produce the same effect. A note on this interesting observation was communicated in June last to the French Academy of Sciences, and a fuller account of the method of investigation, and of some of its results, is contained in the current number of the *Archives de Physiologie*. The effect may be best obtained by taking a few of the secondary fibres of the muscle of the frog or rabbit, immediately after the death of the animal, placing them on a plate of glass, and covering with a piece of thin glass, without the addition of any liquid, the edges of the covering glass being cemented with paraffin to prevent evaporation. The important thing is that the ultimate fibres should be perfectly parallel. If this preparation be placed near the eye in a darkened chamber, and the light entering through a vertical slit is looked at, the preparation being so held that the longitudinal axis of the primitive fibres is parallel to the slit, on each side of the slit there will appear one, two, or three spectra, disposed symmetrically, the first being the most brilliant and least extensive. A more permanent, but equally effective preparation, may be made by drying, at a gentle heat, the sartorius of the frog on a piece of cork, making the surfaces even by a sharp scalpel, clearing with oil of olives, and mounting on Canada balsam.

The muscles of organic life furnish no spectrum. Singularly, even the striated fibres of the heart fail to give it. With those of animal life the spectrum is formed entirely by the transverse striation; the longitudinal striation does not produce it. In the case of the spectrum of a network of striæ upon glass, the size of the spectrum depends upon the number of striæ in a given area, and it is found similarly in the case of muscular fibre that there is a constant relation between the size of the spectrum and the number of sarcous elements contained in a given space. The size of the sarcous elements can thus be ascertained by measuring the size of the spectrum, the effect of the nearness or distance of the striæ on the spectrum being first determined experimentally.

The observation is capable of much physiological and pathological application. By a little management M. Ranvier has succeeded in observing the effect of extension, of slight contraction, and of tetanic spasm, and he finds that as the contraction of the muscle becomes greater, the spectrum lengthens and recedes from the slit. It is to be seen alike during tetanic contraction and in perfect repose, as well as in the intermediate states. From this Ranvier assumes that Merkel is wrong in his opinion that the transverse striation disappears during tetanic spasm. On the other hand, certain pathological states which modify the constitution or the relations of the sarcous elements destroy the property of producing the spectrum.

So perfect are the spectroscopic properties of muscular fibre thus prepared, that the spectrum of blood may be observed with facility by means of such a preparation. A small instrument has been contrived by M. Ranvier for the purpose. The muscular fibre is placed against a small hole in one end of a tube, while in the other end is a vertical slit against which some of the blood is placed. On looking through, the spectrum is seen, with the absorption bands of hæmaglobin distinctly shown.

TYPHOID FEVER IN THE UPPER CLASSES.

IN adverting last week to the frequent occurrence of cases of typhoid fever among those classes of society which may be regarded as being protected from most of the various insanitary conditions to which the poorer classes are exposed, we suggested as worthy of inquiry whether the rich and varied diet of the upper and more opulent ranks of society tended to increase their susceptibility to the action of the fever poison. We neither suggested nor implied, of course, that it might be the origin and cause of the disease: for that we must seek elsewhere, and in the direction of air or water polluted with the products of sewage. When we regard the domestic arrangements and modes of living that exist in so many households, what do we find? Nothing is more common in large houses and in town chambers than for the bedroom to communicate directly with a small dressing room in which is a watercloset. Sometimes the latter, instead of being well-ventilated and placed in the outside wall of the house, occupies a position at more or less distance from the external wall, and is either not ventilated at all

or in such a way that any sewer emanations will find their way into and foul the atmosphere of the sleeping apartment. Occasionally even the closet has only a borrowed light. The effect of opening the window of a watercloset is, as everyone knows, to purify the air of the closet, but this is not to be entirely attributed to the impurities escaping outside, but to a diminution of the upward draught towards the house from the pipes and drains. The difference in pressure between the warm air within the house and the cold air without is equalised, as Professor Pettenkofer has pointed out, by the passage of the air through the shortest and easiest way; and when the closet window is closed, this is from without through the drains and pipes into the house; but when the window is opened, the readiest way is through it, and hence the draught from below ceases. It can be understood, then, that arrangements of the kind we have indicated may prove sources of danger to the occupants of the contiguous bedroom, and the importance of providing a free access of the gases from a sewer or cesspit to the external air by a shaft or pipe carried upwards from the outside can be readily appreciated.

REV. CANON KINGSLEY.

CANON KINGSLEY died at Eversley last Saturday, in his fifty-fifth year. For some time past the health of the Canon had been failing. The immediate cause of death was exhaustion consequent on a prolonged attack of pleuro-pneumonia. His medical attendant, Mr. Heynes, early recognised the serious nature of the case and the gravity of the symptoms. Sir William Gull, at the request of the Prince of Wales, also visited Eversley, and some hopes were given at the time as to the possibility of recovery. The more favourable symptoms on which these hopes were founded must have soon passed away, the next bulletin being of an unfavourable nature, and from that time very little doubt existed as to the ultimate termination of the case. Canon Kingsley had the power of attracting and enlisting the sympathies of his audience; there was in him a feminine as well as a masculine vein; a passionate tenderness; a keen sensibility; a vast capacity of sympathy for sadness and suffering, which addressed itself to the humanity of his hearers. With his untimely death the world will have to mourn the loss of a man who exercised a considerable and altogether wholesome influence on his time. The sunshine of his character shone through all he wrote and did. It was impossible not to recognise in his writings that healthful glow of enthusiasm which belongs to a man fresh and vigorous of mind, sound and supple of frame, and generous of disposition. He might not have been very logical or learned, subtle in argument, or precise and accurate in statement, like John Henry Newman, in controversy with whom he was as a robust rustic in the grasp of a trained athlete; but no one would deny that he was a man of varied and original powers. It is on his works of fiction that his literary fame will mainly rest. It belongs to few men to have written a story at once so fresh and invigorating in tone or glowing in imagery as "Westward Ho!" but Kingsley was no "one book man" in fiction; his "Alton Locke," "Hypatia," "Two Years Ago," "Water Babies," and other works of a similar kind, as well as his successful efforts in poetry, attest the versatility of his powers. If Kingsley did no original work in science, he was still admirable as one of its most delightful expositors, and his sympathies were with men of science, and, as he more than once manifested, with members of the medical profession. In his theological works he shone least. He will be remembered by many chiefly by his popular and fascinating novels; by others, as an associate of Stanley and Maurice as a leader of the Broad Church party. But to our mind the work by which he should best be remembered is his steadfast championship of the poor and the oppressed. His graphic description of the homes of the artizan and agricultural classes in "Alton Locke" and "Yeast" did more good in attracting public attention to this great question than a dozen blue-books on the same subject would have done, and in securing the interference of the Legislature to put an end to the most glaring of the evils. To the end he was a consistent advocate of sanitary reform, and insisted on the necessity of pure air, pure water, and habitable dwellings as one of the first steps to be taken in the moral reformation of our poorer classes.

THE TREATMENT OF PUERPERAL FEVER.

IN addition to the important questions of duty connected with cases of puerperal fever, which we discussed last week, there is another question—that of the treatment of the puerperal patient herself, which, it may be allowed, is one of the most unsatisfactory questions in medicine. At the same time it is to be said that it does not increase in unsatisfactoriness, and that, with a truer insight into the nature of the varied and complicated conditions represented in the name puerperal fever, we seem to see more clearly the nature of our duties, and the chance of doing good by our treatment, and are now and again encouraged by the recovery of very bad cases.

We are not going to be drawn into any fine definitions of puerperal fever. The state we have in view is that of a woman recently confined, who, after a shivering, or something that represents a shivering, has a quick pulse, and a temperature varying from 101° to 105°, with more or less pain in the uterine region—perhaps very little pain, only to be ascertained on deep pressure,—with suppression of milk, more or less distension of the abdomen, the lochial discharge deficient or absent, and offensive, and with more or less tendency to wandering. This is a picture that will be recognised by every practitioner of experience, and the practical question which we propound to our readers, rather by way of consultation with them than in any dogmatic spirit, is this—what is the best course for a practitioner to pursue who has a lying-in patient in the above state? It will be gathered that we exclude from our supposed case the element of a sharp local sthenic inflammation either in the breast or in the pelvis. Where indications of such circumscribed lesion can be found they tend to relieve the mind of the practitioner, and induce him to believe that the constitutional disturbance he sees will be reduced by attention to the inflamed part and by preserving the patient's strength in quiet ways. Excluding cases of obvious local sthenic inflammation, probably the truest and safest view that we can take of such symptoms as we have given above is to regard them as indications of *septicæmia*, arising from introduction into the blood of materials more or less putrid, or capable of giving rise to changes in the direction of putrescence and to low forms of inflammation. Such materials may arise in the patient's own body, or may be introduced from without, as in the case of poisons of erysipelas, or of scarlatina, or of puerperal fever, or of the products of the decomposition of the dead body conveyed by those who dissect. The tendency of late to associate puerperal fever with either scarlatina or erysipelas shows how strongly the septicæmic view of this disease is taking possession of the profession. If this be the correct view, it follows that in the treatment we must aim chiefly at preserving or restoring the purity of the blood—by fresh air, by copious disinfecting washings of the vagina or even of the uterus—as with weak solution of Condy's fluid;

at maintaining strength by nourishing and yet convenient food and stimulants; at relieving local pain by occasional opiates, and by warm poultices, which are invaluable. In nearly all cases it will be found that there is some local inflammation of a low asthenic order, like that of erysipelas, to be met, not by old-fashioned antiphlogistics, but, like erysipelas itself, with tincture of iron associated with quinine. The former may be given in a mixture with spirits of chloroform, while the latter is given in a pill, in doses of two grains every four or six hours. The opium may be very conveniently given in the same pill with the quinine, say in quarter or half-grain doses, or even more. It seems not only to relieve pain, but to act curatively on local inflammation. Purgatives often give rise to much irritation and disturbance, and in grave cases of blood-poisoning we are only too apt to get diarrhœa. In general, it is better to invite the bowels, if sluggish, to act by an enema than to irritate them by a purgative. In no cases is the thermometer more valuable as a guide to the condition of the patient, or to the action of remedies, than in the various cases of puerperal fever.

We have no intention to undervalue other remedies than those we have mentioned, such as turpentine, small doses of tincture of aconite, &c. Dr. Philips, in the book we lately reviewed, has related some results of the latter medicine which are beyond our experience and almost beyond our belief. But the grand thing is to have hope, and to know that there are means by which this sore evil may be somewhat controlled.

MARRIED SOLDIERS.

THE subject of married soldiers is, and always has been, one of no little difficulty to the State, more especially in the case of the army of this country. Compulsory service exists in Germany, and the soldier may from first to last, unless whilst actually serving in the field, never leave the district to which he belongs. The nation is military, and its manhood constitutes the army. In England the case is altogether different. There is no compulsory service, and the soldier is certain to spend much of his time abroad in India or the colonies, and to be moved from place to place whilst serving at home. This is what may be termed his normal life as a soldier during periods of prolonged peace, to say nothing of war, when all is uncertainty. Anyone, even if living in comparative opulence, would find that this frequent change of residence entailed a good deal of expense, and was attended with no little inconvenience and discomfort to himself and family. To provide proper accommodation at the various stations for soldiers' wives and families, and the means of conveying them from place to place, costs a good deal of money, and army life is, after all, the reverse of home life, and opposed to habits of domesticity. Under the best of circumstances the women and children must undergo much suffering from exposure and neglect of various kinds, and there is therefore no help for it but to discourage to the utmost, and mainly in the interests of the unfortunate women and children themselves, marriage in the army. It was contended as one of the advantages of the short service system that it imposed less hardship on the soldier to debar him under such circumstances from marrying. According to the report of the inspector-general of recruiting in America, this same difficulty as to married soldiers has to be encountered there. Married men cannot enlist, but they very commonly marry subsequent to enlistment, with or without the permission of their officers, and the consequence is that "military posts are sometimes overrun with the wives of enlisted men, and frequently the company commanders do not know how many married men there are in their companies." It is added that the women, as might be anticipated, manage in various ways to live out of the Government. We can suppose what would happen if the same system prevailed to the same extent in our army. As it is, the amount of suffering and immorality that follows on the embarkation of a regiment for a foreign station among the poor women and children left behind is something terrible to contemplate. We think, then, that marriage in the army should be restricted within narrow limits, but that the Government should provide decently and well for those who are married.

PHARMACY AND SURGERY AT REDRUTH.

A LIVELY sensation has been produced at Redruth by the case of the worthy driver of an omnibus between Redruth and Falmouth, who by a fall on the ice on the 17th of December sustained a very serious lacerated wound of the arm. He was an Oddfellow, and naturally first consulted the medical officer of the lodge. As often happens, the good advice given was unacceptable. Mr. Hichens recommended the driver not to go to Falmouth. But, with his lacerated arm, he drove the omnibus to Falmouth and back, and threw himself into an agony of cellulitis, from which perhaps the best treatment would not have availed to save him. Another piece of Mr. Hichens's advice was slighted—the application of poultices. And on successive days, instead of using these admirable applications, he used unguents, which turned out to be the "saturnine" applications of one "Dr." S. J. Rowe, a member of the Pharmaceutical Society, who deposed to being "a chemist, carrying on business at Redruth," but who threw no light on the source of his title, which no doubt hails from "the west." Without saying what we think of Mr. Rowe's saturine ointment, we may be allowed a word of admiration for his courage in treating so grave a case until the approach of death suggested the wisdom of retiring in favour of a medical man. It was then too late. The arm and life were alike compromised. Mr. Hichens very properly demanded an inquiry, and the jury returned a verdict of accidental death, adding that they were unanimously of opinion that Mr. Hichens was perfectly justified in withdrawing from the case when he found that his treatment was not carried out. There can be little doubt that if the driver had been guided by Mr. Hichens's advice he would have been alive now. At the same time it is doubtful if the chemist exceeded the law in attending the case. This is a very free country, and a man with a cancer or compound fracture may take his advice, if he so pleases, from a chemist. Mr. Rowe does violate the Medical Act in calling himself "Dr.," and is liable to the consequences of such violation.

CONFIDENTIAL REPORTS.

AN important decision was recently made by the Lord Chief Justice and Justices Mellor, Lush, and Archibald, whereby a decision of the latter was unanimously upheld by the entire Court. It appears that in the case of Farquhar *v.* the Great Northern Railway Company an order had been obtained from Mr. Justice Archibald to allow the plaintiff to see the confidential report on the plaintiff's condition made by the Company's surgeon on their behalf. A motion was made by the Company's counsel to set aside this order, but the opinion of the Court was unanimously in favour of the plaintiff.

It was very justly observed that if the plaintiff was not allowed to see the report he might, with equal justice, refuse to allow the Company's adviser to see him. "If," said the Lord Chief Justice, "there was no negligence on the part of the Company or their servants they cannot want to see the man, and if they have been guilty of negligence then they have no right to intrude upon him unless for the

purpose of the discovery and disclosure of truth in the interests of justice." It was considered most important that the contradictory views of the medical men in such cases should be known to each side as soon as possible before the trial.

There cannot possibly be too opinions as to the justice of this decision. The fact of the matter is that many of our legal brethren live by fencing of this kind, and we are at a loss to see what purpose can possibly be served by reticence and secrecy, unless it be the expenditure of six and eightpences. Undoubtedly the sooner the true opinion of the conflicting advisers is known the better. If this rule were adhered to many more cases might be settled out of court, and much suspense and money might be saved, both to the plaintiffs and the defendants. The refusal of either side to make known the opinion of their medical advisers in such matters seems to us to be tantamount to the admission of a weak case.

THE FEVER AT OVER DARWEN.

THE valuable and exhaustive report of Dr. Stevens on the sanitary condition of Over Darwen, and the causes that led to the outbreak of enteric fever there during the last quarter of the year, was published at the beginning of last week. For the purpose of review it may conveniently be divided into four heads:—1. With respect to the water-supply. 2. The sewage arrangements. 3. The unhealthy condition of the tenements. 4. The origin of the present outbreak. First, with respect to the water-supply, the chief source of the water supplied to the town is from the watershed of the neighbouring hills, the actual intake being near Tockholes, nearly two miles distant from the town. A portion of the stream is interrupted for the town supply, and is conducted to a capacious well-head, from thence by a conduit to Service Lodge, and then distributed by means of pipes to the town. The water-conduit receives, however, in its course, additional supplies from spring and land drainage, and consequently is subject to contamination. At the intake it was subject to defilement from the refuse and surface drainage of a farm-yard, besides, up to very recently, the sewage from overflowing cesspools. The local board are constructing a reservoir that will prevent this contamination. Secondly, the sewerage of the town is very defective; indeed, a large part of the town has no sewerage or drainage whatever, the existing sewers are badly placed and badly constructed, and as no provision is made for their ventilation the sewer-gases escape into the interior of houses, and "sewer-stink houses" is quite a common expression at Darwen. The chief sewer of the town appears to be the river Darwen, the bed of which, however, is silting up from the deposit of foul refuse constantly thrown into it. Thirdly, Dr. Stevens says the unhealthy condition of some of the tenements wellnigh baffles description, the worst feature being the arrangements for dealing with the excrement, ashes, and refuse. In one case the foundations of a house were used as a receptacle for all kinds of filth from a number of houses, and the medical officer complained of the excreta from a fever case being emptied into the hole! Lastly, the immediate cause of the fever, as we stated last week, was found to proceed from contamination of the water-supply, owing to the emptying specifically infected excretory matter from a drain of a house situated in the outskirts of the town into the adjacent fields. Through these fields the main which brought the town water, and was supposed to be impervious, on examination proved the contrary, and a leakage was discovered which permitted the excretory matter coming from the infected house to enter it, and be distributed through the town. Though a committee of the local board reported in 1861 upon contamination of the water-supply by sewage, the same condition of things exists in 1875. Miles of streets are unpaved and unsewered! Such is the picture of a rising and important town in England in the nineteenth century, and we fear it is by no means unique. Perhaps in another century, if the Local Government Board fulfils its large promises, such an example may become impossible.

SANITARY WORK IN THE COMING PARLIAMENT.

MR. C. S. READ, the Parliamentary Secretary of the Local Government Board, in addressing his constituents at Harlesden a few days ago, observed that "beyond the consolidation of the Sanitary Acts and the amendment of the Adulteration Act, and one or two smaller measures, he did not think his department would have a very conspicuous part to play in the Parliament. And he would remark with regard to the consolidation—perhaps he might say the codification—of certain numerous Acts of Parliament, he thought it very essential." We cannot affect to regret that the Local Government Board proposes in the ensuing session to limit its sanitary work to the legal rather than the sanitary aspects of public health administration. It has exhibited no indisposition to make use of its legal staff, and that should be fully competent to make such a consolidation of sanitary law as Mr. Read speaks of. If, as Mr. Stansfeld states, the sanitary policy of the Board continues to be the same as when he was President, the less it interferes with the medical aspects of sanitary legislation the better for the country at large. It will be sufficiently difficult to get disentangled from our present sanitary administrative and legislative muddle, for which the Board is responsible, without adding other difficulties. It would be well, moreover, that a consolidation of existing sanitary laws should precede further legislation, and we trust that the Board may find it possible to effect such a consolidation in the coming session.

DIETARY SCALES AFLOAT.

A GREAT amount of correspondence has lately occupied the columns of the *Shipping Gazette* on the well-worn subject of dietary scales for seamen. Some few years ago, when the Merchant Shipping Act of 1867 became law, this important subject was thoroughly sifted in THE LANCET; and at that time we took occasion to observe that, if proper scales of diet were instituted for sailors, the so-called "antiscorbutic" clauses of the Act might be expunged, and lime-juice cease to be carried and dispensed in the British mercantile marine. And it was naturally to have been expected that steam, the Suez canal, and many other modes of quickening sea passages that have lately been introduced, would all tend towards a wholesome reform in the eating arrangements of the forecastle. But Jack still subsists upon salt beef and pork alternately six days a week; and it is a positive though an almost incredible fact, that in some of our largest sailing ships no preserved meat is given out for weeks together. It appears to us that this and the physical disabilities of seamen are subjects to which too little attention has been given in the discussions that have lately taken place on the condition of our mercantile marine. We have always contended that to ensure, as far as possible, the safety of ships at sea, two conditions are absolutely necessary: (1) that the crew should consist of healthy men; and (2) that they should be fed and berthed well. Neither of these subjects has received any sort of attention from persons commercially interested in the prosperity of our mercantile marine, because they fail to see that it is as important to employ sound seamen as seaworthy ships, and that no vessel, however staunch, can be considered safe if she is manned by an unhealthy and ill-fed crew.

THE OXFORD RAILWAY ACCIDENT.

SINCE our report three weeks ago on the injuries received at the Shipton railway accident, all the cases in the Radcliffe Infirmary, Oxford, have, with one exception, progressed satisfactorily. Those patients who, at the time of the last report, were in a dangerous or critical condition are now nearly well, and no fresh case of erysipelas has occurred. The young woman who was suffering seriously from the effects of fracture of the base of the skull is now much improved, the paralysis of the left side of the face has entirely disappeared, and the patient is quite sensible and wishes to go home. It was found necessary to perform amputation in the case of the compound fracture of the ankle-joint which did so satisfactorily for nearly three weeks. A large wound had formed over the external malleolus, and many fragments of bone were lying at the bottom of the wound, so that it was determined to remove the foot and lower part of the leg at the junction of the middle and lower third. This was accordingly done by Mr. Symonds on the 17th inst. Esmarch's elastic bandage was employed, and no blood was lost. On examining the foot after removal, Mr. Morgan informs us that the inner malleolus was completely detached, and that a fracture extended up the shaft of the tibia for about two inches. The astragalus was broken in two, the anterior half being widely separated from the posterior. Some of the metatarsal bones were also fractured. Since the operation, up to the time of going to press, the patient has done well. The erysipelas case is now nearly recovered, and the man whose arm was amputated gets up every day, and the stump is well-nigh healed. Only ten patients now remain in the infirmary.

THE POLLUTION OF RIVERS.

AN influential meeting was held at Edinburgh on the 21st instant, the Duke of Buccleuch in the chair, to consider a report read by Mr. MacIntosh on the pollution of the Scotch rivers. Sir Robert Christison, in moving the adoption of the report, said that his connexion with movements of a similar kind dated from 1830; he thought that with regard to the three great necessaries of life, food, drink, and air, no one ought to be entitled to pollute any of these articles; nay, more, he came to the conclusion that this was a case in which prescription ought not to apply. It was evident, moreover, from the recent action of Government in sending out commissions, that, sooner or later, an end would be put to the systematic pollution of our rivers. The report was unanimously adopted. We are glad to find that action is being taken throughout the country to remove this great evil. We are convinced that much of the waste products of manufactures at present poured into our rivers might be utilised and made a source of profit, whilst the evils of pouring our sewage into streams, too often the only source of water supply, are daily becoming more obvious, as Mr. Cross admitted the other day, in the increase of "excremental disease" throughout the country.

IRELAND.

WE are glad to learn that Mr. Rawdon Macnamara has been re-elected the representative of the College of Surgeons of Ireland in the General Medical Council. Mr. Macnamara ably represented the Irish interest last year, and it would be unwise for the College to change its selection more often than absolutely necessary.

The Chair of Midwifery of the Royal College of Surgeons is again vacant, Dr. John Cronyn, who was appointed on the 14th inst. in Dr. Sawyer's place, having resigned; a fresh election will, therefore, take place on the 4th February. It is expected that the contest will lie between Dr. J. R. Kirkpatrick and Dr. Roe. The emoluments of the post are worth about £150 per annum.

The death of the venerable Robert Adams causes two surgical vacancies, which the leaders of Dublin surgery will doubtless aspire to fill. The post of Surgeon in Ordinary to the Queen in Ireland may and ought to be filled at once, since the Lord Lieutenant can have no difficulty in recommending for the post a gentleman who may honourably represent surgery in relation to royalty, even though fortunately his active services may never be required by Her Majesty. The Regius Professorship of Surgery in Dublin University cannot be filled up for three months, and if surgical eminence alone is to turn the scale the authorities will have ready to their hands another gentleman whose name is a household word in connexion with "conservative surgery."

SIMPSON v. DAVEY.

IT will be remembered that in THE LANCET of Dec. 5th, 1874, we commented upon the unfortunate case of Simpson *versus* Davey, in which a medical man was mulcted in heavy damages for having communicated the syphilitic poison inadvertently to a patient whom he attended in labour. The summing-up of the Lord Chief Justice, which we also published, showed that no blame could be fairly attributed to Dr. Davey, who was himself the victim of the disease, contracted in the course of professional duty. We are glad to find that a movement has been set on foot to recoup Dr. Davey to some extent for his losses, which, independently of his own legal expenses, amount to £750. The case deserves the sympathy of the profession, since it is one in which no lack of professional knowledge or caution can be attributed to Dr. Davey, as is sometimes the case in actions brought against medical men for alleged malpraxis. His case is one which may be that of any member of the profession, however careful, and it is certainly hard that he should suffer so considerably in pocket as well as in reputation and bodily health. Dr. Herbert Davies, Dr. Andrew Clark, Mr. Jonathan Hutchinson, and other gentlemen who have long known Dr. Davey, will be glad to receive contributions to the fund now in course of formation, or they may be forwarded to Mr. Reilly, the treasurer, 68, Victoria Park-road, and will be duly acknowledged in these columns.

A NUISANCE AT BRIGHTON.

WE recently published a letter from a correspondent at Brighton, drawing attention to the very objectionable practice now pursued by the corporation of collecting the mud and filth of the streets, and depositing it on the sea-beach in front of the town. After all the costly measures, sanitary and otherwise, that have been undertaken to enhance the natural advantages of Brighton, it seems pitiful that such an obnoxious and dangerous proceeding as the conversion of the shingle into a cesspool should be permitted to continue. Taking the statements of our correspondent for facts, the acquiescence of the Town Council in the evil is most reprehensible, while the supineness of the inhabitants who are so much interested in preserving the salubrity and good repute of the town in tolerating such a desecration of the sea-front as that described is inexplicable. For some time Brighton has been singularly free from the presence of zymotic disease, as evidenced by the reports of the medical officers of health, Dr. Taaffe and Dr. Kebbell; but if the indecent method of disposing of filth which now obtains is not speedily obviated, we shall probably before long hear of the outbreak of one of the fevers. We are glad

to see that the local press is interesting itself in the matter, and bringing the weight of its influence to bear on the authorities, who, we trust, will soon be under the necessity of rectifying the abuse complained of. A little vigorous agitation on the part of the ratepayers may probably hasten the accomplishment of the desired reform.

MR. PRESCOTT HEWETT, F.R.S.

AT the meeting of the Weekly Board of St. George's Hospital, on Wednesday last, a letter was read from Mr. Prescott Hewett, resigning his office as surgeon to the hospital. On the motion of Mr. Charles Hawkins, seconded by Dr. Barclay and supported by Mr. Pollock, a resolution expressing deep regret at Mr. Hewett's resignation, and much gratitude for his long and valuable services, was carried unanimously; and notice was given that the next Quarterly Court would be made special, for his appointment as Consulting Surgeon. The present senior assistant surgeon, Mr. Rouse, will succeed Mr. Hewett as full surgeon; and the vacancy occasioned by Mr. Rouse's promotion will probably be filled up by the appointment of Mr. Warrington Haward, the present curator of the museum.

THE HAMPSTEAD FEVER HOSPITAL.

WE are almost, we had nearly said quite, tired of the Hampstead people, and their doings. It is possible to have one's sympathy with even a good cause weakened by the stupidity of its advocates. The Hampstead people, or rather those who manage their affairs, have at last suggested another site for the hospital—viz. a piece of land of nine acres in extent lying between the Finchley and Edgware Roads. The site has been reported on by Dr. Murchison, at the request of the Committee, and his report is on the whole favourable. But if it is the case, as stated by members of the Asylums Board, that the site was one which was seen and rejected when the other was selected, it is hardly likely that they will eat their own words and accept it now, without any compensation for what has been expended on the other site.

THE STRAND PAVEMENT.

THE battle of the pavements has now passed west of Temple-bar, and seems likely to be fought out in the Strand. The intention to shortly repave the street of that important thoroughfare with granite has evoked a determination on the part of the inhabitants to resist the proposed measure. Meetings of influential householders will, it is said, be convened to protest against the step, and at the same time to urge the propriety of laying down wood pavement. The superiority of this to all other pavements in noiselessness, durability, and safety has now been pretty clearly demonstrated in London. We have so often pointed out the objectionable nature of stone pavement—injurious alike to man and beast,—that anything we might again say on the subject would be reiteration. We hope the authorities will not set themselves in opposition to the wishes of the inhabitants and ratepayers, but will cordially co-operate with them in their endeavours to secure wood pavement for the Strand.

THE GUILDFORD HOSPITAL.

WITH reference to a letter published in our issue of last week from the Secretary of the Guildford Hospital, in which an explanation is given to the charge recently made against the authorities of the institution, a correspondent writes as follows:—"The reply from the Guildford Hospital altogether misses the point that the patient was sent away without medicine or treatment of any kind. If the case was suitable for treatment as out-patient only, that treatment ought to have been begun at once, and not postponed until the child could be brought again after the lapse of a week, as directed. I believe the case, if presented at a London Hospital, would have been thought one eminently fitted for in-door treatment, but, of course, the authorities of Guildford must be allowed to have their own opinion on this point. As to reasons 2 and 3, I would state that another patient presented an in-door letter on the same day and was admitted, though no certificate had been sent beforehand, and the case would really have been sent to the Union infirmary, but, on the chance of there being plenty of room in the Guildford Hospital, it was thought he might *possibly* get in there. The one refused was by far the most serious and most interesting case of the two. I am not aware of a single instance in which the certificate referred to has ever been sent for a patient. It is generally looked upon as an unnecessary waste of time, and that the hospital authorities will, after all, accept or refuse a case upon personal examination."

GARIBALDI AS A SANITARY REFORMER.

THIS old hero has in his time played many parts, and, after having fought many foes and surmounted many difficulties by dint of pluck and perseverance, he is now going to head a Roman army of sanitary reformers and see what can be done for the material interests of Rome by bringing a Bill into Parliament for improving the Campagna and embanking the Tiber. We hope he may be as successful in his new undertaking against bad drainage, dirt, and malaria, as he was in that one of his many military expeditions in which his successful achievements went a long way towards the accomplishment of the great object of his life—Italian unity.

PRINCE LEOPOLD.

THE public will have perceived, with feelings of gratification, that the latest bulletins regarding his Royal Highness have become somewhat more reassuring in tone. Seeing that the Prince is able to take more nourishment, and that he is reported to have slept well and to have gained a little in strength, we may feel warranted in hoping that these are to be regarded as the first indications of his ultimate recovery.

THE opponents of the Contagious Diseases Acts in the provinces are at present for some reason or other in a flutter of trepidation and activity. Meeting after meeting is held for the purpose of denouncing a most excellent law, and the usual amount of hysterical shrieking and incoherent arguments (which will certainly never induce Parliament to repeal the Acts), are advanced. The Acts are proved to be working more and more good every year they are in operation, of which anyone examining the question without bias cannot fail to be convinced. We are sorry to see English gentlewomen lending their sanction to the agitation on this unsavoury subject—a subject which, whatever may be thought of its legal or moral aspects, had better be left alone by them.

WITH reference to the fatal prevalence of fevers in Carlisle, a correspondent informs us that the village of Wetherel, situated about five miles above Carlisle, pours its sewage into the Eden; and that Brampton, a town of about two or three thousand inhabitants, pours a large part of its sewage into the Orthing, a tributary of the Eden. Brampton is about ten miles from Carlisle. There are also many other villages which send sewage into the Orthing, &c., and will thus tend to make the water of the Eden impure.

THE report of the Darlington Hospital and Dispensary, read at the annual meeting of the subscribers and friends of the institution, held last week, though not entirely satisfactory from a financial point of view—there being, on the year's operations, a balance of £113 odd due to the treasurer,—contains an interesting piece of information—namely, that the workmen at the large works of Ianson and Co. had consented to have a penny per week deducted from their wages for the support of the hospital. At the same meeting a resolution was adopted recommending that a new hospital should be built more calculated to meet the requirements of the town.

THE Local Government Board has addressed a letter to the authorities of the Brentford Union Workhouse, on the subject of overcrowding in the house, stating that an order will be issued at once fixing the number of inmates to be placed in each ward of the establishment. The Guardians are therefore requested to determine measures for providing the additional accommodation which is so urgently needed. The children's wards are said to be wholly unfit for the reception of children, and the London Board has threatened to close them if better provision in this respect be not immediately made.

DR. SEDGWICK SAUNDERS, medical officer of health for the City, in his last report to the Corporation, states that 354 houses had been inspected during the previous week, 35 of which required sanitary improvement in various particulars. During the same period eight bodies had been received at the mortuary and kept there until the time for burial. Nearly two tons of meat were condemned as unfit for human food.

THE mortality in London last week amounted to 1569 deaths, including 6 from small-pox, 4 from measles, 58 from scarlet fever, 10 from diphtheria, 55 from whooping-cough, 34 from different forms of fever, and 13 from diarrhœa. The fatal cases of scarlatina again showed a slight excess upon the corrected weekly average. The deaths referred to diseases of the respiratory organs considerably declined under the influence of the mild weather.

THE operation of the Adulteration Act appears to be far more beneficial in certain districts of the metropolis than in others. Islington now seems to be specially favoured in the purity of its food. Out of 55 samples of various dietary articles lately examined by Dr. Tidy, the analyst for the district, 3 only, and those of mustard, were found to be adulterated. The vestry and inhabitants generally of Islington are to be congratulated on this statement.

A BANQUET in aid of the funds of the Royal Sea-Bathing Infirmary, Margate, was given this week, at the Freemasons' Tavern, under the presidency of the Earl of Shrewsbury and Talbot. We are sorry to learn that the finances of an institution which performs so much good work are in a depressed state. It is to be hoped that an appeal to the public for aid will be speedily followed by an augmentation of the funds at the disposal of the managers.

THE Rev. W. R. TRENCH, following the example of the Rev. Mr. Moss, has offered to place at the disposal of the Health Committee of Liverpool the sum of £1000 towards improving the worst-conditioned parts of the town. The offer, however, is contingent "upon at least ten times the amount being made available, within a reasonable time, upon the lines laid down generally in Mr. Moss's letter."

MR. GIBSON, Q.C., has been returned to represent the University of Dublin, having polled 1210 votes, whilst his opponents, Mr. Miller and Dr. Traill, obtained only 759 and 538 respectively.

Obituary.

DEPUTY INSPECTOR-GENERAL R. T. C. SCOTT.

THERE are very few among the older naval officers, whether executive or medical, who will not experience a feeling of deep regret on learning the death of Deputy-Inspector-General Robert T. C. Scott, which took place at his family residence, Melby, Shetland, on the 6th inst., after an illness of only three days.

This lamented officer entered the Royal Navy in 1833, and, after a short period of service in Plymouth Hospital, joined the *Pique* frigate, and was in that vessel when she got on the rocks on the coast of North America, and in her subsequent perilous voyage to England. He was afterwards for several years assistant-surgeon of the *Vanguard* and *Britannia* in the Mediterranean, in the former of which ships occurred the well-known episode of the "Stomach-pump," when Mr. Scott protested against an arbitrary and senseless order from the first lieutenant, and effectually vindicated the independent action of naval medical officers. After his promotion he served successively in the *Talbot*, in the *Pacific*, the *Hastings* flag ship of the China station, and in the *Royal George* in the Baltic during the two years of the Russian war. While in the *Hastings* he was actively employed in the Burmah war, under Commodore Sir George Lambert, and gained the Blane medal for his journal, containing the medical and topographical history of the expedition. For this and other services he was appointed Staff-surgeon in charge of Haulbowline Hospital, Queenstown, and was soon after offered the appointment of Deputy Inspector-General at Hong-Kong, which last however he declined for private reasons. After three years in the flag-ship at Plymouth, he was finally transferred to the Royal Dockyard at Sheerness, and in this situation his popularity with all under his care was unbounded. The address delivered to him by the workmen on his being unexpectedly superseded from his appointment by the Childers' Admiralty (a fate he shared in common with many other officers) will long be remembered in the place, as will also a more recent visit, when his portrait was hung up in the Co-operative Hall.

Mr. Scott was a man possessed of many rare qualities. In addition to being an able and conscientious medical man, he had a good knowledge of natural history, and had made a splendid collection of shells from all parts of the world. His conversational powers were of a high order, and the description he gave of the various events of his life was always graphic and interspersed with touches of brilliant humour. He was actively benevolent and warm-hearted, had a genial, social nature, and was a courteous gentleman in his manners. He was beloved and looked up to by his brother officers, and many of his most attached friends were old messmates in the executive ranks of the service.

Mr. Scott's family has for several generations occupied a prominent place in the Shetland Islands, and by the death of an elder brother he himself succeeded to the property in 1851. He will be sadly missed by the cottier farmers, of which class the tenantry of the estate are chiefly composed, and he has left a widow and two children, besides a large circle of relatives, to mourn his premature death.

DR. WILLIAM MACDONALD.

ON the first day of January of this year, at a ripe old age, died William MacDonald, M.D. Edin., F.R.C.P.E., F.R.S.E., F.L.S., F.G.S., Professor of Civil and Natural History in the University of St. Andrews. He was in his eighty-fourth year, and had been in failing health for some months previous to his decease. He was a native of one of the smaller western isles, and a true Highlander. From his earliest years he possessed a wonderful power of acquiring all kinds of knowledge. He was educated at the best of

schools, and finally graduated as Doctor of Medicine at Edinburgh University in 1818. In 1836 he became a Fellow of the Royal College of Physicians of Edinburgh. By the death of his father he inherited valuable property, and instead of practising his profession, he settled down as a Highland laird, under the name of Ballyghear. He soon after married, and in time had a family around him. Though never wasteful, he was unfortunate in his farming, and by degrees embarrassments followed. His lands were sold, and he had to begin the world again when the best of his years were past. When various things failed, and hope was low, the Marquis of Ailsa presented Dr. MacDonald to the professorship of Civil and Natural History at St. Andrews University. This professorship was comparatively a sinecure. It formed no part of the required curriculum, and only those students who desired it took his class. But he went about among the generous youth like a true peripatetic philosopher, giving encouragement and instruction, and the teachings of experience. He was most popular among the students. Endowed with great observative gifts, he amassed stores of knowledge, and nothing delighted him so much as to impart that knowledge. He could give a bit of sage advice too. On one occasion, on meeting the writer's father, with whom he was very intimate, Dr. Macdonald, on learning that the writer was a student of medicine, said, "Tell your son to be sure to learn veterinary surgery, as well as human, for there is many a 'cuif' (*Anglicé*, blockhead) who would grudge him half-a-crown to mend his wife, would readily give him a guinea to mend his horse."

Dr. Macdonald outlived his wife. He left three sons, two of whom are officers in the East India Service. He was many years ago Lecturer on Natural History and Comparative Anatomy at Lane's Medical School, adjoining St. George's Hospital, London. Besides his medical qualifications, he was a Fellow of the Royal Society of Edinburgh and of other kindred associations.

JAMES DAWSON, F.R.C.S.E.

THE happy tourist, as he rowed on "spacious Windermere" towards Ambleside, could not fail to be struck with an imposing castle on his left. And very little inquiry was needed to ascertain that its occupant was "Dr." Dawson, at one time a busy practitioner in Liverpool, but for thirty years or more the proprietor of this stately mansion, and living most gratefully in the hearts of the people of the lake district for the "ready help" that was ever forthcoming to the poor when they needed sympathy and advice. The least curious of medical men would be dissatisfied till he learned more of one so honourable to his profession. And the more he learned the more he would wish to know of the Squire of Wray Castle. Perhaps he ventured on a visit of respect, only to find a venerable man of ninety years, of dignified appearance, of extreme courtesy, of well-judged liberality, of high culture, and in thorough sympathy with all his neighbours. Such was the man who has passed away from the Lake District, and concerning whose life we have seen no other than the scant notification of its ending in *The Times*, and in our own obituary, in the following words:—

"On the 17th inst., James Dawson, F.R.C.S.E., M.R.C.S.E., of Wray Castle, Ambleside, aged 96."

Such modest departure from the Lake and the parish where he did so much good, and where he will be so much missed, is too marked to be due to anything but the wish of the deceased, and, as such, shall have our respect, however hard it may be to be brief in the praise of one who became a member of the College in 1806, and who, to our knowledge, up to five years ago, was not prevented by weather or the weight of ninety years from consideration for the poorest of his neighbours or courtesy to the most casual of his visitors.

BEQUESTS &c. TO MEDICAL CHARITIES. — The Stamford and Rutland Infirmary has become entitled to at least £2500, and probably more, under the will of Mr. H. Clay, surgeon, formerly of Stamford, who died in Japan. The Southern Dispensary, Bath, has become entitled to £500 under the will of Mr. Walter Tucker, and received £100 under that of Mr. Joseph Dallaway, the late treasurer and secretary.

Medical News.

ROYAL COLLEGE OF SURGEONS OF ENGLAND. — The following gentlemen, having passed the required examinations for the diploma, were duly admitted Members of the College at meetings of the Court of Examiners on Monday, Tuesday, and Wednesday last:—

Adkins, Edward James, Canonbury.
Barron, Thomas Walter, Sunderland.
Black, James, Highgate-road.
Boddy, Evan Mariett, L.S.A., Camberwell-road.
Brodribb, Francis Benjamin, L.S.A., Upper Clapton.
Buckland, Alfred George, L.S.A., Auckland, New Zealand.
Chapman, Paul Morgan, Camden-park-road.
Clutton, Henry Hugh, Westminster.
Collenette, Frank de B., L.S.A., Guernsey.
Cooper, Ernest Frederic, Canonbury.
Dent, Clinton Thomas, Chesham-street.
Dearden, John Alfred, L.R.C.P. Edin., Douglas, Isle of Man.
Dixon, James Deighton, Gateshead-on-Tyne.
Duke, Herbert, Clapham-road.
Edmunds, Walter, M.B. Cantab., Hampstead.
Friend, Frederick Worrell, Bayswater.
Haden, Arthur Charles, Sloane-street, Chelsea.
Hales, Robert Turner, Holt, Norfolk.
Habgood, Henry, Eastbourne, Sussex.
Hawkins, Alexander F., Blackrock, Dublin.
Hughes, William Lewis, L.S.A., Carmarthen.
Hutton, Edwin Rutherford, Lever-street, St. Luke's.
Jackson, Ernest Carr, Harley-street.
Jones, Valentine L. W., Carmarthen.
Jones, William M., Blaenavon, Monmouthshire.
Kains, Robert, M.B. Toronto, Palace-road.
Lee, Edwin, Leeds.
Lewis, Ivor Ajax, L.R.C.P., Llantrissant, South Wales.
Marks, Charles Ferdinand, Dublin.
Morris, Walter Cameron, Barbadoes, West Indies.
Newsham, Francis, L.R.C.P. Edin., Oldham.
Newton, Edward Shackfield, Canonbury-park.
Owen, Herbert Isambard, Gloucester-gardens.
Parkes, Alfred, West Bromwich.
Paul, Ernest Watson, L.K.Q.C.P.I., Brixton.
Pink, Thomas, L.S.A., Greenwich.
Richardson, William B., Leeds.
Ross, George Hamilton, L.R.C.P., Hart-street.
Roy, John James, Hammersmith.
Rudd, Leonard, Kempsey, Worcestershire.
Sall, Ernest W. H., Dolphin Holme, Lancashire.
Sampson, Henry Moore, Yeovil, Somerset.
Sargent, Arthur Francis, Belsize-park, Hampstead.
Smith, Sydney Lloyd, L.R.C.P. Edin., Brixton-road.
Strandling, William Arthur, Sloane-street, Chelsea.
Streeten, Friend Edward, Ealing, Middlesex.
Vaillant, Marie Edouard, George-street, Portman-square.
Wallis, Kenneth Serjeant, Cambridge.
Webb, Charles Louis, L.S.A., Bentley, Hants.
Williamson, Francis, Durham-place, Chelsea.

The following gentlemen passed the primary examination in Anatomy and Physiology on the 21st instant:—

G. A. Boodle, F. A. Hallsworth, G. R. Howat, H. M. Floyer, H. F. Chapman, J. W. Langdon, and H. L. Walcott, St. Bartholomew's Hospital; E. J. D. Bovand, J. C. Wilkinson, and J. S. Clowes, Guy's Hospital; R. Owen, Charing-cross Hospital; G. H. Hornsby and H. G. Lowe, Birmingham; G. P. Best and J. Biale, St. George's Hospital; J. Weller, London Hospital; W. P. Blackley, St. Thomas's Hospital; M. H. S. Allen, St. Mary's Hospital; H. S. Atkinson, King's College; I. L. Alleyne, University College.

Of the 108 candidates examined on the 19th, 20th, and 21st inst., 44 failed to satisfy the Court of Examiners, and were referred for three months' further anatomical and physiological study.

Professor Erasmus Wilson, F.R.S., will commence his Course of Lectures on Dermatology, in the theatre of the College, on Monday next, at 4 o'clock P.M.

APOTHECARIES' HALL. — The following gentlemen passed their examination in the Science and Practice of Medicine and received certificates to practise on Jan. 21st:—

Lewis, Joseph, Milborne Port, Somerset.
Walker, Hyde Edwards, Broughton-in-Furness, Lancashire.

The following gentleman passed the Primary Professional Examination on the same day:—

Barrow, John, St. Bartholomew's Hospital.

[On the 7th inst. James William Orr, of Pemberly, Bedford, passed his examination at the Hall and received his certificate, and *not* John Pine Catford, as by mistake reported in THE LANCET of Jan. 16th.]

UNIVERSITY OF CAMBRIDGE.—The Professor of Anatomy (Professor Humphry) has given notice that the lectures on Anatomy and Physiology will be continued on Thursday, January 28, and on subsequent Tuesdays, Thursdays, and Saturdays, at 1 P.M., in the New Museums. The Lectures on Practical Anatomy will be continued on Wednesdays and Fridays at 9 A.M. There will be classes in the

Easter Term for gentlemen who are preparing for the Second Examination for M B. There will be classes in Osteology and Practical Histology in July and August.

SOCIETY FOR RELIEF OF WIDOWS AND ORPHANS OF MEDICAL MEN.—The Quarterly Court of the Directors of this Society was held on the 13th inst., the President, Sir George Burrows, Bart., in the chair. The acting treasurer stated that the grants to be made amounted to £1236 10s., to be distributed among fifty-eight widows and seventeen children, and three children were to be relieved from the Copeland Fund. The expenses of the quarter were £55 12s. 5d. Three new members were proposed and elected. The Christmas Donation to the widows and orphans voted at the last Court had been given a few days before Christmas to fifty-six widows and twenty children, £5 to each widow, £2 to each child, and £5 to each of the three children on the Copeland Fund, amounting in all to £329. The deaths of two widows receiving grants were announced, and two fresh applications from widows were admitted. It was resolved that a committee, consisting of the president, treasurers, and secretary, should be formed to draw up a circular, stating the advantages to be derived from joining the Society, to be sent to all members of the profession residing within the limits of the London District Post and the county of Middlesex. As no anniversary festival will be held this year, the benevolent friends of the Charity are invited to send their donations to the Treasurer or Secretary.

Medical Appointments.

ALDRIDGE, J. P., M.D., L.R.C.P.Ed., F.R.C.S.E., has been appointed Medical Officer to the Dorchester Branch of the improved Order of Old Friends, No. 10 Lodge, vice Good, resigned.

BEACH, FLETCHER, M.B., Physician's Assistant at Bethlem Hospital, has been appointed Medical Superintendent of the Clapton Asylum for Idiots.

BISHOP, G. H., M.R.C.S.E., has been appointed House-Surgeon to the Female Lock Hospital, Westbourne-green, vice Juler, appointed Resident Registrar at St. Mary's Hospital.

BRANWELL, R., M.R.C.S.E., has been appointed Consulting Surgeon to the Brighton and Hove Dispensary, vice Pocock, deceased.

BRUMWELL, G. W., L.R.C.P.Ed., M.R.C.S.E., has been appointed Medical Officer for the Scalthwaiterigg District of the Kendal Union, vice J. T. Brumwell, M.R.C.S.E., resigned.

BRUNTON, T. L., M.D., M.R.C.P.L., F.R.S., has been appointed an Assistant-Physician to St. Bartholomew's Hospital, vice Church, appointed a Physician.

BURGESS, Mr. E. J., has been appointed Assistant Administrator of Chloroform at St. Bartholomew's Hospital.

CARRE, Dr. F., has been appointed Medical Officer, Public Vaccinator, and Registrar of Births &c., for the Letterkenny Dispensary District of the Letterkenny Union, Co. Donegal, vice G. E. Carre, M.B., appointed Resident Medical Superintendent of the Castlebar District Lunatic Asylum.

COXWELL, J. E. G., L.R.Q.C.P.I., M.R.C.S.E., has been appointed a Medical Officer to the Worthing Infirmary, vice Goldsmith, resigned.

CRESSWELL, T. H., M.R.C.S.E., has been appointed Medical Officer and Public Vaccinator for the Maresfield District of the Uckfield Union, vice Brown, deceased.

CUNDELL, Mr. G. R., has been appointed Junior House-Surgeon to the Female Lock Hospital, Westbourne-green.

DRURY, Dr. R., has been appointed a Resident Surgeon to the General Dispensary, Birmingham, vice Edginton.

EDGINTON, E. W., M.R.C.S.E., has been appointed Resident Medical Officer at the Campden-hill Branch of the General Dispensary, Birmingham, vice Hunt, resigned.

ELLERTON, J. F. H., M.R.C.S.E., has been appointed an Assistant Resident Medical Officer to the General Infirmary, Leeds.

EVANS, S., L.R.C.P.L., M.R.C.S.E., has been appointed Medical Officer and Public Vaccinator for Nos. 1 and 2 Districts of the Tendring Union, and Medical Officer of Health for the Harwich Urban Sanitary District, vice Freshfield, deceased; also, Civil Surgeon to the Troops at Harwich.

FIRTH, C., M.B., M.R.C.S.E., has been appointed an Assistant-Surgeon to the Norwich Lying-in Charity, vice Ward, resigned.

FLEMING, W. J., M.B., L.F.P. & S. Glas., has been appointed Assistant to the Professor of Physiology in the University of Glasgow.

GARTLAN, J., M.D., has been appointed Superintendent Medical Officer of Health for the Dundalk Rural Sanitary District.

GIBSON, R. E., M.R.C.S.E., has been appointed Surgeon-Accoucheur to the Norwich Lying-in Charity, vice Crosse, resigned.

HOAR, W., M.R.C.S.E., has been appointed a Consulting Surgeon to the West Kent General Hospital, Maidstone, on resigning as a Surgeon.

JULER, H. E., M.R.C.S.E., has been appointed Resident Registrar to St. Mary's Hospital, Paddington, vice Marshall, whose appointment has expired.

LAMB, W. H., L.R.C.P.L., M.R.C.S.E., has been elected House-Surgeon to the Public Hospital and Dispensary, Sheffield, vice Thorpe, resigned.

LEVINGE, E. G., A.B., M.B., L.R.C.S.I., has been appointed Junior Assistant Medical Officer of the Hants County Lunatic Asylum, Knowle, Fareham.

LIVESEY, Mr. E., has been appointed Assistant House-Surgeon to the Derbyshire General Infirmary, Derby, vice Greenwood, whose appointment has expired.

M'BRIDE, C., M.D., C.M., has been appointed Medical Officer and Public Vaccinator (*pro tem.*) for the Parish of Kirkkinner, Wigtownshire, vice Cumming, deceased.

MAHON, C. J., L.K.Q.C.P.I., L.R.C.S.I., has been appointed Medical Officer, Public Vaccinator, and Registrar of Births &c., for the Euskey Dispensary District, Upper Division, of the Dromore West Union, vice Nolan, resigned.

MEIGHAN, T. S., M.D., has been appointed a Surgeon to the Glasgow Eye Infirmary.

MUNRO, ÆNEAS, M.D., C.M., F.F.P. & S. Glas., has been appointed Assistant-Physician to the Hospital for Women, Soho-square.

MUSGRAVE, S., L.R.C.P.Ed., has been appointed Superintendent Medical Officer of Health for the Lisburn Rural Sanitary District.

OLDHAM, C. J., F.R.C.S.E., L.R.C.P.L., has been appointed an Honorary Surgeon in Ordinary to the Brighton and Hove Dispensary, vice Branwell, resigned.

O'MEARA, F. A., L.R.C.P.Ed., L.R.C.S.Ed., has been appointed Medical Officer of Health for the Southern Sub-district of the Axminster Rural Sanitary District.

REEVES, H. A., M.R.C.S.E., F.R.C.S.Ed., has been appointed Surgeon to the Hospital for Women, Soho-square.

ROONEY, Dr. J., has been appointed Medical Officer, Public Vaccinator, Registrar of Births &c., and a Sanitary Officer for the Shercock Dispensary District of the Bailieborough Union, Co. Cavan, vice Langan, appointed to the Kingscourt Dispensary District.

SMITH, J. G., L.R.C.S.Ed., L.M., has been appointed Medical Officer and Public Vaccinator for the Parish of Reay, Caithness-shire, vice Bruce, deceased.

SUTHERLAND, D. M'G., M.D., L.R.C.S.Ed., has been appointed Medical Officer and Public Vaccinator for the Parish of Dunnet, Caithness-shire, vice Bruce, deceased.

TODD, J. G., L.R.C.P.Ed., L.M., has been appointed Medical Officer for the Byers-green District of the Auckland Union, Durham.

WADDELL, J. C., M.D., has been appointed an Assistant-Surgeon to the Norwich Lying-in Charity, vice Gibson, resigned.

WHITE, B. S., M.R.C.S.E., L.M., has been appointed Medical Officer and Public Vaccinator for the No. 9 District of the Brentford Union, vice Litchfield, resigned.

WOLLASTON, R. G., L.R.C.P.Ed., M.R.C.S.E., has been appointed Medical Officer and Public Vaccinator for the Lyme Regis District of the Axminster Union, Devon, vice Pritchard, resigned.

Births, Marriages, and Deaths.

BIRTHS.

ADAMS.—On the 18th inst., the wife of E. J. Adams, L.R.C.P.Ed., of Approach-road, Victoria-park, of a son.

CLENDINNEN.—On the 22nd inst., at St. Mary's-grove, Stafford, the wife of Wm. E. Clendinnen, L.R.C.S.Ed., of a son.

GANGE.—On the 26th inst., at Faversham, the wife of F. A. Gange, M.D., of a daughter.

HARRIS.—On the 21st inst., at Maries-hill, Godstone, the wife of A. G. B. Harris, L.R.C.P.L., of a son.

RAWLINS.—On the 17th inst., at Highgate-road, the wife of Henry Armstrong Rawlins, M.R.C.S.E., of a son.

MARRIAGES.

ARBUCKLE—BASSETT.—On the 19th inst., at St. Andrews, Nottingham, Hugh Wight Arbuckle, M.D., of Thorne, Doncaster, to Martha Elizabeth, daughter of the late Richard Bassett, Esq.

LAKING—MANSELL.—On the 26th inst., at St. James's, Piccadilly, Francis Henry Laking, M.D., to Emma Ann, daughter of the late Joseph Mansell, Esq.

DEATHS.

ARTHUR.—On the 19th inst., Thos. Arthur, M.D., of Airdrie, Lanarkshire, aged 30.

BOURNES.—On the 16th inst., Wm. H. Bournes, M.D., of Killala, Co. Mayo.

DAVENPORT.—On the 19th inst., Chas. Davenport, L.R.C.P.Ed., of Bromsgrove, Worcestershire.

HUGGINS.—In April last, in the foundering of the R.M.S.S. "Liberia," on the voyage from Liverpool to the West Coast of Africa, Horatio N. F. Huggins, M.B., aged 26.

KEELE.—On the 23rd inst., at Highfield Lodge, near Southampton, H. W. Keele, M.D., Staff Surgeon R.N., aged 84.

KEVIN.—On the 24th inst., at Oxford-terrace, Hyde-park, Charles Kevin, M.R.C.S.E., Deputy Inspector-General of Hospitals, late of the Madras Medical Establishment, aged 67.

MORISON.—On the 23rd inst., at Fourdoun, Geo. Morison, M.D., of Montrose, aged 27.

OTLEY.—On the 22nd inst., at Camberwell, John Otley, F.R.C.S.E., late of Maidstone, aged 66.

[N.B.—*A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.*]

BOOKS ETC. RECEIVED.

Dr. Smith: Commentary on the British Pharmacopœia.
Sir H. Holland, Bart.: Fragmentary Papers on Science and other subjects.
Mr. Eassie, C.E.: Cremation of the Dead.
Dr. Dalton: Experimentation on Animals.
Dr. Parkes: On the Issue of a Spirit Ration during the Ashantee Campaign of 1874.
Mr. Girdleston, M.A.: Number—a Link between Divine Intelligence and Human.
Index to Pathological Transactions. Vols. XVI. to XXV.

METEOROLOGICAL READINGS

(Taken by Steward's Instruments).

THE LANCET OFFICE, JAN. 29TH, 1875.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Wet Bulb.	Dry Bulb	Solar Radia. in Vacuo	Max. Temp. Shade	Min. Temp.	Rain-fall.	Remarks at 8 A.M.
Jan. 22	29·85	W.	...	34	...	43	33	0·45	Cloudy
,, 23	29·68	S.W.	37	38	...	54	33	0·15	Raining
,, 24	29·16	W.	44	47	...	50	37	0·09	Raining
,, 25	29·20	W.	41	42	...	47	42	0·23	Raining
,, 26	30·08	N.	39	40	...	46	39	0·34	Overcast
,, 27	30·24	S.W.	45	46	...	52	40	...	Overcast
,, 28	30·19	W.	45	47	...	...	44	...	Overcast

Notes, Short Comments, and Answers to Correspondents.

FEMALE DOCTORS.

M. RICHELOT has, in two articles (*L'Union Médicale*, Jan. 23rd, 1875), shown that the existence of such doctors is a melancholy fact, and the author grieves that the Faculty of Paris should lend a hand to this sad deviation of the mission of women. The author in his second article quotes the vigorous words of Dr. Tilt, the President of the Obstetrical Society of London, who contends that women are under various circumstances unfit for the anxieties of medical practice. M. Richelot gives a biographical sketch of Mrs. Garrett-Anderson, and of Miss Putnam, of New York, who lately married Dr. Jacobi, the cousin of the German politician of the same name. The author considers that both the examinations and the theses of these ladies were weak. Miss Putnam's essay was on "Neutral Adipose Tissue and Acid Fat." To write this thesis she had made numerous experiments upon kittens, which she used to kill after having fed them for a month or more on cod-liver oil. What would the Norwich Society say, adds M. Richelot, to this? The great *alma mater* of female students is, however, Zurich. Last year this University counted no less than 180 female students, almost all from Russia, with a few Germans and Hungarians, one only being French. Of these numbers, 120 belonged to the Faculty of Medicine. This great prosperity has, however, received a serious check, as the Emperor of Russia will not permit any female doctor to practise in his Empire who has obtained the Zurich diploma. This ukase was the consequence of violent conduct amongst the female students, who, on some socialist question, had repaired to the streets, where a regular battle was fought, and revolvers freely used. Nor is this severe measure in the least undeserved, as will be seen in the sequel. One day Prof. Biermer had a severe sore-throat, and begged the students not to smoke during lecture whilst his illness continued. The next day the students of both sexes filled, as usual, the lecture-room. All the men had thrown away their cigars before entering; whilst all the women persisted in smoking enormous pipes, in spite of the Professor's sufferings. Thus we see to what excesses women are carried when they overstep the line traced by bountiful nature.

A Belgian Physician.—1. Dr. West's book.—2. Dr. Wilson Fox's work is a good one, and will fully satisfy our correspondent.

Dr. Paget is thanked for his courtesy.

DIAGNOSTIC DIFFICULTIES.

To the Editor of THE LANCET.

SIR,—The following cases may be of some interest, especially under the circumstances of the inquest at Woolwich.

C. O——, aged six. Seen on Nov. 2nd. The day previously the child had complained of headache, shivering, and vomiting, and during the night the mother thought the child would have died in a fit. Present condition: Tongue furred, red papillæ; throat sore; temperature 104°; pulse 130; red minute eruption over whole of body, but especially well marked on the back. No sneezing or cough. Eruption very carefully examined, as measles had been prevalent (I alone having had over a hundred under my care during the previous three months).

Nov. 3rd.—The case remains the same; temperature 103°.

4th.—The child remains in the same state.

5th.—There is a well-marked eruption of measles; but on careful examination I can still detect the minute red spots intermixed with the rubeoloid eruption.

Subsequently the glands of the neck became enlarged, and ultimately sloughed; the throat was likewise extensively ulcerated. The convalescence was very protracted, the child having a considerable amount of dropsy.

On Nov. 9th a second child sickened for measles. Eruption very characteristic; symptoms mild.

Nov. 13th.—Went on well till to-day. During the night the child had become very much worse, so much so that the mother sent for me at 8.30 A.M. Tongue furred; throat sore; and the whole of the body covered with a minute red eruption. The remains of the measles were still to be detected. In this case likewise the glands of the neck became enlarged, and the symptoms clearly indicated it to be one of scarlatina.

Are we to regard these cases as simply measles complicated with some eruption? or was it one of measles and scarlatina combined? I myself lean to the latter view. It is quite impossible to look upon it as one of rotheln.

Your obedient servant,

Newbury, January, 1875. MONTAGU PALMER, M.R.C.S., &c.

THE SUBMARINE RAILROAD BETWEEN CALAIS AND DOVER.

M. DE LESSEPS, of Suez Canal celebrity, mentioned at a late meeting of the Academy of Sciences of Paris that a Bill was at the present time before the French Assembly, authorising the preliminary works of this stupendous undertaking. The house of Rothschild is the principal promoter. The line would begin about two miles north of Calais, and end two miles south of Dover. The length would be about twenty-five miles, which, with a stretch of eight miles beyond Calais, and eight beyond Dover, would make a length of about forty-one miles (fifty kilomètres). The greatest depth of the Strait is fifty-four yards. Thus, if we suppose the Cathedral of Nôtre Dame of Paris to be there submerged, the towers would be twelve yards above the level of the sea. The bottom consists of resisting grey chalk, which fact will facilitate the perforating work. No filtration need be feared, for galleries of coal mines along the west coast of England are well known to stretch several miles under the sea. Miners in these galleries can hear the waves and the rolling of the shingle, and they fancy that one day the cuttings will take them over to Ireland. M. de Lesseps adds that M. Thomé de Gamond was the first to start the idea of such a tunnel, and that he ruined himself in the attempt to form a Company.

THE TREATMENT OF CHOLERA.

To the Editor of THE LANCET.

SIR,—Illness has hitherto prevented my sending a reply to the letter of Dr. Alexander Smith, which appeared in your impression of Jan. 2nd.

What I said at the meeting of the Royal Medical and Chirurgical Society was this: That with regard to the exhibition of morphia, I had heard, just before I left India in November, 1873, that eight native soldiers *at Cawnpore* had been treated by the subcutaneous injection of quinine and morphia, on *the plan recommended by Dr. Alexander Smith*, and that they had all died.

I have the pleasure of knowing Dr. Smith personally, and he was kind enough to send me a copy of his book, in India. I know that his duties do not permit him to attend patients, and I hope that what I have stated above will satisfy him that the form in which the remark he regrets was framed was not calculated to mislead, but was simply the result of what I said being imperfectly reported.

With regard to the reports of Surgeon-Major Scott and Surgeon Rurton, Dr. Smith is quite right in assuming that I was ignorant of their existence. I did not know of them till I saw his letter. I have not yet been able to see them. Dr. Smith says that the hypodermic injection of chloral hydrate was fully tried in ten cases with no good results. Besides the account of the nineteen cases published by Mr. Higginson, the civil surgeon of Kheri, in Oudh, in the *Indian Medical Gazette* for January, 1874, I have some private letters from him, giving very satisfactory details of the results of the treatment adopted by him in these same nineteen cases at the *commencement* of an outbreak. When then I see that the same treatment has *completely* failed in other cases, I think it not unreasonable to inquire about the *quality* of the chloral hydrate employed in the latter cases. I have heard that chloral hydrate varies much in its purity when made, and that it is particularly liable to deteriorate in India. But the *principle* that I advocate is the treatment of the collapse of cholera by *pure sedatives*, and I do not bind myself to chloral only.

Should there be an outbreak of cholera in India this year among the British troops, I hope that Dr. Smith's plan will be fully tried in all its details. I not unnaturally also hope that the hypodermic injection of chloral will not be abandoned, and that care will be taken to have that drug of the best quality, and that it will be kept in glass stoppered *black* bottles, in as cool a place as possible. To prove that I have faith in my own theory, I can only say that I am willing to go *anywhere* where cholera may be raging, for the purpose of putting to a thorough test the *sedative treatment of cholera collapse*. I am, Sir, your obedient servant,

A. R. HALL,
Surgeon, Army Medical Department.

Topsham, near Exeter, Jan. 17th, 1875.

Mr. Arthur Eddowes.—We cannot give our correspondent the information he requires in detail. It can only be obtained by inquiry, if, indeed, any instances of the kind exist.

ST. GEORGE'S HOSPITAL.

To the Editor of THE LANCET.

SIR,—Will you do me the favour to correct the report that I intend to continue to act as assistant obstetric physician at St. George's Hospital. It is my intention to relinquish the specialty of obstetric medicine, and I am only waiting now until Dr. Barnes is able to undertake the duties at St. George's.

Truly yours,

Savile-row, W., Jan. 26th, 1875. ROBT. J. LEE.

THE DAVEY DEFENCE FUND.

FURTHER contributions received on behalf of the above Fund:—

W. Bowman, Esq.	...	...	£1 1 0	Dr. J. Luke ...	...	...	£1 1 0
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THE following additional subscription has been received at THE LANCET Office on behalf of the above:—

Dr. Frank, Cannes £3 2 0

Enquirens is entitled to charge for visits in excess of the ordinary number after confinement. The fee is for successful vaccination.

A LEECH REMOVED FROM THE GLOTTIS.

AN interesting case of this kind has been inserted in the *Gaz. Med. di Padova*, No. 48, 1874. Dr. Clementi, of Caltagirone in Sicily, was called in August, 1874, to a woman, who for two weeks had been coughing and spitting blood. She had lost her voice, and was threatened with choking. With the laryngoscope a leech was seen lying across the rima glottidis, and partly concealed by the chordæ vocales. By means of appropriate forceps, Dr. Clementi succeeded in removing the leech, though the latter adhered with great force to the part. The patient eventually recovered perfectly. The operator gives a full account of the case, and enters into numerous and very instructive details. Prof. Vanzetti, to whom they were first communicated, has added some remarks, in which he shows how leeches may enter the frame along with drinking water, the hæmopis being the kind generally found. The Professor quotes several cases of such leech intrusions—first by Prof. Marcacci; a second by Trolard, who was the first to discover the leech by means of the laryngoscope; a third by Massei, who succeeded by means of the mirror and dentated forceps.

Mr. Higginson.—We do not think it has been published.

THE STATE OF THE ARMY MEDICAL DEPARTMENT.

To the Editor of THE LANCET.

SIR,—Will you kindly grant me space to say a few words. In THE LANCET of August 8th, 1874, you published a letter from "An Injured One," which well described the state of discontent and heart-burning which the late Warrant has caused in the British Medical Department. The deep dissatisfaction is daily increasing, and now the service has become almost intolerable; and if matters are allowed to continue as they are at present, the army medical service will become like that of the navy, that surgeons, if their resignations are refused, will rather submit to court-martials than remain in it. The new system, which has removed medical officers from their regiments, caused an immense amount of expense and discomfort on account of the constant moving about, never allowing them now to settle down and make themselves comfortable like other officers, and which isas objectionable to commanding as it is to medical officers, has proved a complete failure. That "medical officers have lost greatly in social status and position" by the so-called unification scheme there cannot be a doubt. Can you, who have always done so much for the department, inform your numerous readers in distant climes what changes, if any, are contemplated in the British medical service? for many like myself are anxiously waiting and hoping that the good old system, which worked so well, may again be introduced before sending in their resignations. To be obliged to leave a service in which the best years of one's life have been spent, and in which men have slaved and given their hearts to their work, because a few seem determined to complete the ruin of the department, is indeed hard. "Hope deferred maketh the heart sick," and such is indeed the case in the Army Medical Department. I remain, Sir, your obedient servant,

December, 1874. M.D.

Mr. W. D. Spanton.—We are obliged to our correspondent for calling attention to the subject; but we do not see that we could in fairness close our columns to such advertisements, or that any good would accrue from it if we did. We have never hesitated to give an opinion of the system; but people are free to hold erroneous views so long as they involve nothing morally wrong.

Dr. Mackintosh's letter shall be kept in mind.

SALARIES OF MEDICAL OFFICERS OF HEALTH.

To the Editor of THE LANCET.

SIR,—I do not know if the attention of the profession has been called to the fact that in several instances lately boards of guardians, as the constituted sanitary authorities in rural districts, have been reducing the salaries of medical officers of health without rhyme or reason. Of course an appeal has been made to the Local Government Board for interposition and redress, and of course (beyond sending a copy of the appeal *back* to the guardians to irritate them still more) no help has been given from Gwydyr House. In my own case I have been mulcted one-half of my original salary, though the Local Government Board was memorialised by various influential men, and after a most unsatisfactory correspondence I was left,

January, 1875. A VICTIM.

P.S.—Is this what the Local Government Board calls backing of one's friends? If so, "a plague o' such backing say I."

*** It is not likely that medical officers of health will receive much help from the Local Government Board as to salary. Mr. Stansfeld told us a fortnight ago that the sanitary policy of the Board was essentially one of diminishing incidence of expense. The first overt act of sanitary administration of the Board was an attempt to lessen the salary of its own Medical Officers.—ED. L.

PUERPERAL FEVER AND ERYSIPELAS.

To the Editor of THE LANCET.

SIR,—Kindly give me your opinion in the following case. I am induced to ask it from having read your article in last Saturday's LANCET.

A patient of mine expects to be confined the middle of February. A friend came to visit her on December 10th, 1874. As soon as she arrived she complained of feeling very ill. Next day I was sent for, and found her suffering from erysipelas; it was a bad case, lasting till January 11th, on which day she went home. During her illness she had an abscess form in both eyelids. The erysipelas extended to her head, half way down her back, down both arms and legs, also feet and hands. The question I would ask you is this: Can my patient be confined in the same *house* without risk of taking the disease? I have advised her to go away, but she does not like to leave home. Your opinion in your next number will greatly oblige,

Yours truly,

January 25th, 1875. M., L.S.A.

*** The advice given is sound. The smallest risk should not be incurred when the consequences of it might prove to be of so serious a character.—ED. L.

OPIUM.

THE *Philadelphia Medical and Surgical Reporter* states that the opium crop now averages from 4000 to 6000 baskets or cases. Of this quantity the United States require above 2000 cases. The price has risen lately, averaging £1 per lb. Fifteen years ago it averaged 15s. per lb. Owing to the late high prices, some persons at Smyrna have, during the last two years, adulterated the pure drug by mixing it with spurious matter, and passing it off as first quality. They succeeded in selling about 300 cases during the last two years; but as the fraud has been discovered, the consequence has been that purchasers have been very careful from whom they obtain this drug. The crop for 1874, which is collected in May and June, has suffered considerably from the late severe frosts; consequently a short yield will also increase the value. In 1873 the stock existing in Smyrna was 1500 baskets; in London, 700; and in the United States 600 baskets.

Mr. Tom Nicholls.—The matter has already been noticed in THE LANCET.

INCONTINENCE OF URINE.

To the Editor of THE LANCET.

SIR,—On reading "B.'s" letter in your last impression, one would naturally ask the cause of the inability to hold urine. If from no disease, then probably it is only due to the habit of micturating too frequently in the daytime. Having successfully treated a patient suffering in a similar way, I am glad to give details.

My patient at night only wore an indiarubber ring (as a sort of jugum) round the root of the penis, sufficiently to compress the corpus spongiosum, and so cause pain at the time of relaxation of the sphincter vesicæ, which woke the patient, who then got up and emptied his bladder. This, with the use of ferruginous tonics and sea-salt baths night and morning, together with the advice of holding his urine as long as possible during the day, was the means of releasing him from a malady at once distressing to himself and all concerned. Faithfully yours,

January 24th, 1875. M. DE B.

To the Editor of THE LANCET.

SIR,—A correspondent asks for suggestions as to the treatment of incontinence of urine. I can confidently recommend the internal use of belladonna. In common with many others, I have found this remedy of great value as a means of curing nocturnal enuresis. If necessary, its administration might be kept up for some weeks. "Chronic diseases need chronic therapeutics." A few minims of the tincture may be given thrice daily.

Yours &c.,

Birmingham, Jan. 23rd, 1875. JAMES SAWYER, M.D., &c.

To the Editor of THE LANCET.

SIR,—In reply to the query of "B.," I would suggest his trying small doses of tincture of belladonna three times a day, and at the same time causing his patient's bed to be so made each night that there will be a slight incline from the foot to the bolster, in order that the urine may gravitate away from the neck of the bladder towards the fundus. I have found this treatment very efficacious in cases of the above affection, and, should your correspondent think proper to give it a trial, shall be glad to learn with what result it has been attended in his hands.

I am, Sir, your obedient servant,

Curragh Camp, Co. Kildare, Jan. 25th, 1875. M.B.

To the Editor of THE LANCET.

SIR,—If "B." will make his patient empty his rectum at night, naturally if possible (if not, by means of warm enema), and after the rectum is emptied and lapsed into quiescence, inject into it four ounces of ice-cold water as he lies down to sleep, to be retained there, the incontinence will in time disappear. The remedy is simple; but from the apathy and laziness of these patients, the regular application, on which alone success can attend, is difficult. Yours truly,

Windsor-road, Holloway, Jan. 23rd, 1875. JOHN G. WINSTONE.

To the Editor of THE LANCET.

SIR,—In answer to "B.," I should be glad if he would try the following, as I have found it beneficial in four or five cases, at the same time asking him to forward me the result:—Creasote, one minim; compound rhubarb pill, two grains: to be taken three times a day.

Yours faithfully,

Fulbourn, Cambs, January, 1875. CHAS. E. WALKER.

To the Editor of THE LANCET.

SIR,—For incontinence of urine, let your correspondent try five grains of benzoic acid, made into a pill with glycerine, to be taken three times a day.

Yours &c.,

Birmingham, Jan. 26th, 1875. J. G. S.

Veritas.—It is not our intention to notice the case referred to by our correspondent.

Dr. Nicholls (Chelmsford) is thanked.

URTICARIA.

To the Editor of THE LANCET.

SIR,—Can one of my professional brethren in England help me in a very bad case of chronic general urticaria, lasting about a year, to the great discomfort of a young lady twenty-three years of age? I have tried every kind of medicines, internally as well as locally, such as arsenic, iodide of potassium, alkalies, sulphur, hot baths, vapour baths, collodion with bichloride of mercury, &c., but with no effect. I am not able to find any constitutional disturbance, nor any trouble of the digestion nor of the menstruation; but this lady was before subject to occasional eczematous eruptions on the face, which have not occurred since the urticaria appeared.

I am sure that similar cases must be very common in the practice of the hospitals of London, and, if so, they must have been the subjects of the thoughts and experiments of many physicians. Would they then oblige,

Yours truly,

Brussels, January, 1875. A BELGIAN PHYSICIAN.

EMOLUMENTS OF ARMY MEDICAL OFFICERS.

To the Editor of THE LANCET.

SIR,—In Dr. Hamilton's recent pamphlet on the Army Medical Department it is stated that for an annual average outlay of £2537 per annum, extending over eleven years, the Government might adopt the Indian service system of promoting the junior medical officers at twelve years. A contemporary, in a review of the pamphlet, states that it would require five or five and a half times the sum mentioned by Dr. Hamilton; that the real cost to the Government would be £10,335 per annum for the same number of years. I have examined into this difference of opinion, with the result that I believe Dr. Hamilton's estimate to be nearer the truth than that of the review in question; for, according to my calculations, an annual average sum of about £4700 during the next twelve years would be the additional vote required to meet the increased cost of the twelve years' system. Dr. Hamilton states that the highest annual additional vote would be about £7000. My tables give £7026 as the maximum.

I have omitted altogether the question of forage; at present it is not guaranteed by promotion. The value of the difference between the allowances pertaining to the ranks I take at 8*d.* per diem (Dr. De Chaumont's estimate). The tables are calculated for twelve years, because it is for that number that the current monthly Army List supplies the necessary data. The numbers in the Army List are corrected at the rate of 4 per cent. per annum for deaths &c.

Tables A and B give approximately the number of officers drawing promotion pay and allowances in each of the twelve forthcoming years, and the cost of promoting them. Table C compares the two systems, showing that the cost of the 12 *versus* the 15 years' system would be about £3729 1*s.* 8*d.* per annum, very much the largest proportional outlay being during the next six years. To find the total cost we must add the value of the difference of allowances, easily found by multiplying the difference 972 between the numbers 2987 and 2015 at foot of columns 17 A and 14 B, by 8×365, reducing, and dividing by 12. The result is £985 10*s.*, which added to £3729 1*s.* 8*d.* give the total annual additional average outlay, £4714 11*s.* 8*d.*

Twelve Years' System. Table A.

Years.	Number on Promotion Pay each Year. Completed Years of Service. 26	25	24	23	22	21	20	19	18	17	16	15	14	13	12	Total.	Cost per diem.	Cost per annum.
1875	—	—	—	—	—	—	—	—	—	—	—	30	27	9	20	86	£14 10 0	£5,292 10 0
1876	—	—	—	—	—	—	—	—	—	—	29	26	9	20	67	151	25 15 0	9,398 15 0
1877	—	—	—	—	—	—	—	—	—	28	25	9	19	64	63	208	33 15 0	12,318 15 0
1878	—	—	—	—	—	—	—	—	27	24	8	19	62	60	33	232	38 15 0	14,143 15 0
1879	—	—	—	—	—	—	—	26	23	8	18	60	58	31	28	252	48 7 6	17,656 17 6
1880	—	—	—	—	—	—	25	22	8	17	58	56	30	27	54	297	65 17 6	24,044 7 6
1881	—	—	—	—	—	24	21	7	16	56	54	29	26	52	13	298	72 2 6	26,325 12 6
1882	—	—	—	—	23	20	7	16	54	52	28	25	50	12	—	287	73 10 0	26,827 10 0
1883	—	—	—	22	19	7	16	52	50	27	24	48	12	—	20	297	83 1 0	30,331 10 0
1884	—	—	21	19	7	15	50	48	26	23	46	11	—	20	15	301	93 5 6	34,045 7 6
1885	—	20	19	6	14	48	46	25	22	44	10	—	19	15	—	288	101 7 0	36,992 15 0
1886	19	18	6	14	46	44	24	21	42	10	—	18	14	—	14	290	108 15 0	39,693 15 0
Totals.	57 at 12*s.* per diem. £34 4 0		563 at 9*s.* per diem. £253 7 0					1405 at 5*s.* per diem. £351 5 0					962 at 2*s.* 6*d.* per diem. £120 5 0			2987	£759 1 0	£277,071 10 0

Fifteen Years' System. Table B.

Years.	Number on Promotion Pay each Year. Completed Years of Service. 26	25	24	23	22	21	20	19	18	17	16	15	Total.	Cost per diem.	Cost per annum.
1875	—	—	—	—	—	—	—	—	—	—	—	30	30	£7 10 0	£2,737 10 0
1876	—	—	—	—	—	—	—	—	—	—	29	27	56	14 0 0	5,110 0 0
1877	—	—	—	—	—	—	—	—	—	28	26	9	63	15 15 0	5,748 15 0
1878	—	—	—	—	—	—	—	—	27	25	9	17	78	19 10 0	7,117 10 0
1879	—	—	—	—	—	—	—	26	24	9	17	59	135	33 15 0	12,318 15 0
1880	—	—	—	—	—	—	25	23	8	16	57	56	185	51 5 0	18,706 5 0
1881	—	—	—	—	—	24	22	8	16	55	54	28	207	60 10 0	22,346 15 0
1882	—	—	—	—	23	21	8	16	53	52	57	25	225	66 13 0	24,327 5 0
1883	—	—	—	22	20	7	15	51	50	26	24	46	261	78 1 0	28,488 5 0
1884	—	—	21	19	7	15	49	48	25	23	44	11	262	87 14 0	32,010 10 0
1885	—	20	19	7	14	47	46	24	22	42	11	—	252	96 12 0	35,259 0 0
1886	19	18	7	14	45	44	23	21	40	10	—	20	261	104 16 0	38,252 0 0
Totals.	57 at 12*s.* per diem. £34 4 0		564 at 9*s.* per diem. £253 16 0					1394 at 5*s.* per diem. £348 10 0					2015	£636 10 0	£232,322 10 0

The Systems Compared. Table C.

Years.	Cost per annum, 15 years' system.	Cost per annum, 12 years' system.	Excess due to 12 years' system.
1875—1876	£2,737 10 0	£5,292 10 0	£2,555 0 0
1876—1877	5,110 0 0	9,398 15 0	4,288 15 0
1877—1878	5,748 15 0	12,318 15 0	6,570 0 0
1878—1879	7,117 10 0	14,143 15 0	7,026 5 0
1879—1880	12,318 15 0	17,656 17 6	5,338 2 6
1880—1881	18,706 5 0	24,044 7 6	5,338 2 6
1881—1882	22,346 15 0	26,325 12 6	4,078 17 6
1882—1883	24,327 5 0	26,827 10 0	2,500 5 0
1883—1884	28,488 5 0	30,331 10 0	1,843 5 0
1884—1885	32,010 10 0	34,045 7 6	2,034 17 6
1885—1886	35,259 0 0	36,992 15 0	1,733 15 0
1886—1887	38,252 0 0	39,693 15 0	1,441 15 0
Totals for 12 years.	£232,322 10 0	£277,071 10 0	£44,749 0 0

*** EXCESS due to 12 years' system = £44,749 in 12 years, or £3,729 1*s.* 8*d.* per annum.

A few examples from the tables will illustrate the principle of construction.

1. On the 12 years' system there would be about 86 men to promote on the 1st of April, 1875, about 30 of them having completed 15 years' service. Trace the numbers diagonally downwards to the left, and you find them diminishing yearly.

2. On the 15 years' system there would be about 30 men to promote on the 1st of April, 1875. In the following year there would probably be about 29 of these left, and there would be about 27 to promote, making 56 in all; and the pay due to their promotion would be 5*s.* per diem, inasmuch as they would be surgeons of fifteen years' service.

3. In 1886 the 290 men on pay due to promotion at 12 years' service cost £108 15*s.* per diem, thus:—

Promotion pay of 37 (19+18) at 12*s.* per diem	...	...	... £22 4 0
„ „ 134 (6+14+46+44+24) at 9*s.* per diem			... 60 6 0
„ „ 91 (21+42+10+18) at 5*s.* per diem			... 22 15 0
„ „ 28 (14+14) at 2*s.* 6*d.* per diem	...	...	... 3 10 0
290			£108 15 0

If forage allowance was guaranteed by promotion as formerly, the difference between the allowance of the two ranks would be 3*s.* instead of 8*d.* In such a case it might be found by the tables that an annual average sum of £8164 would suffice to meet the expenses entailed by the adoption of the twelve years' system. After twelve years the incurred annual outlay would be much less. Trusting that my contribution may be of some use,

I remain, Sir, your obedient servant,

January 18th, 1875. J. P. H. BOILEAU, Staff Surgeon.

PRECAUTIONS AGAINST CARRYING PUERPERAL FEVER.

To the Editor of THE LANCET.

SIR,—In reply to "Obstetricus," I beg to state that many years ago, having a succession of fatal puerperal fever cases during one week, I then, as directed by Dr. Copland in his Medical Dictionary, washed my hands in spirits of turpentine, and had no more cases. An obstetrician in general practice will find it useful to rinse the hands, after post-mortems or cases of erysipelas, before going to a labour case, in spirits of turpentine.

Yours &c.,

January 23rd, 1875. VERITAS.

TETANUS.

To the Editor of THE LANCET.

SIR,—I have read with interest Dr. Hamilton's history in this day's LANCET of a case of traumatic tetanus. I cannot, however, forbear calling attention to the fact that counter-irritation to the spine formed no part of the treatment; and this appears the more remarkable when we note the words in which Dr. Hamilton states the results of the ophthalmoscopic examination: "The above condition is, no doubt, the result of the general state of irritation of the spinal cord." Your obedient servant,

Sunbury, Jan. 10th, 1875. J. S.

LISTER'S METHOD.

"On n'est jamais prophète chez soi." This method has never created any great enthusiasm in the United Kingdom, though many surgeons have fully perceived its advantages, and carry it out with great minuteness. But it is principally abroad that Lister's plan has found admirers, especially in Germany. We have before us a pamphlet, published by Dr. Gesualdo Clementi, of Caltagirone in Sicily, in which the author takes an extensive survey of the success of Lister's method in Europe. He does not fail, however, to mention the criticisms which have been offered respecting it, but endeavours to combat the objections. The author is himself a great adept, and closes his pamphlet by saying: "After having seen Lister's method employed by surgeons both in Edinburgh and London, I consider that Lister is right when he asserts that if all surgeons do not obtain the same admirable results as himself, it is because they do not accurately carry out the method according to the rules he has laid down."

ERRATUM.—In Dr. Joseph Seaton's letter, published on page 147 of our last number, the word "purists" should have been printed *jurists*.

COMMUNICATIONS not noticed in the current number will receive attention in our issue of the ensuing week.

COMMUNICATIONS, LETTERS, &c., have been received from — Dr. Paget, Cambridge; Dr. Barnes, London; Sir Duncan Gibb, London; Dr. Sawyer, Birmingham; Dr. Ogilvie Will, Aberdeen; M. Martin-Lawzey, Paris; Mr. T. Nicholls, London; Dr. Kebbell, Brighton; Dr. Dolan, Halifax; Dr. Sandford, London; Mr. Alcock, Aldershot; Mr. Walker, Fulbourn; Mr. Herring, New York; Mr. Palmer, Newbury; Mr. Winstone, London; Dr. D. Hooper, London; Mr. Farquharson, London; Dr. Webber, London; Mr. Poole, London; Mr. Beach, London; Dr. Harris; Mr. Buckley; Mr. Pointer, Winchester; Mr. Lovinge, Newcastle; Dr. Wiltshire, London; Mr. Keyworth; Mr. Gould, London; Dr. Sidney Ringer, London; Mr. Lawson, Wakefield; Mr. Turner, London; Mr. Tallack; Mr. Forman, London; Mr. Lennox Browne, London; Mr. Higginson, Birkenhead; Mr. Cooper, Richmond; Mr. Hovell, London; Dr. Spencer Cobbold, London; Dr. Spanton; Mr. Christison, Edinburgh; Mr. Sproston, Birmingham; Mr. Shaw, Wandsworth; Dr. R. J. Lee, London; Mr. Fleming, Glasgow; Mr. Ernest Sheaf, Barrow-in-Furness; Mr. West, Birmingham; Mr. Harrison, Liverpool; Mr. Hibberd, London; Dr. J. Seaton, Sunbury; Mr. Kempe, London; Mr. Reed, London; Mr. Walker, Glasgow; Dr. Clegg, Bacup; Mr. Morgan, Oxford; Dr. Lachlan, Tobermoy; Mr. Walker, Wakefield; Mr. Love, Wolverhampton; Mr. Wilson, London; Mr. Startin, Cobham; Mr. Muscroft, Pontefract; Dr. Cristiforis, Milan; Dr. Griffiths, Dublin; Mr. Benbough, London; Messrs. Clarke, Bleasdale, and Co., York; Mr. German Reed, London; Mr. Hunter, Matlock; Dr. Nicholls, Chelmsford; Dr. Gramshaw, Walton-on-the-Naze; Mr. Bally, Brighton; Dr. Mackintosh, Chesterfield; Mr. Burdett, London; Dr. Merryweather, Guisborough; Dr. Abbotts Smith, London; Mr. Torrance, Wolston; Mr. Atthill, Waterbeck; Dr. Taylor, Penrith; Mr. E. J. Burgess, London; Mr. Birch, London; Mr. Reilly, London; Mr. Lamb, Sheffield; Mr. Hanbury, London; Dr. Cheever, Boston, U.S.A.; Mr. Taylor, Kennington; Messrs. Harvey & Reynolds, Leeds; Messrs. J. & G. Johnston, London; Messrs. Aitken & Sons, Bishopshill; Mr. Terry, Bradford; Mr. Thomas, Liverpool; Mr. Hyatt, Shepton Mallet; Mr. North, York; Messrs. Hewlett & Sons, London; Messrs. Howell & Eady, London; Dr. Sloan, Bellshill; Mr. Mackay, South Stockton; Dr. Hay, Bridport; Messrs. Kelly and Piet, Baltimore; Dr. Lane, Clun; Mr. Groves, London; Dr. Boyland, Baltimore; The Russian Consul-General, London; Veritas; Royal Institution; M. De B.; A. B.; G. H. K.; Crimea; Observer; M.B.; A Constant Reader; T. S. M.; L.R.C.P.; &c. &c.

LETTERS, each *with enclosure*, are also acknowledged from — Dr. Mundie, London; Mr. Earlam, Abbots Bromley; Dr. G. Hunter, Linlithgow; Mr. Fisher, Shere; Mr. Thomas, Brackley; Mr. Bower, Blockley; Mr. Roe, Ellesmere; Mr. Monckton, Hurstpierpoint; Mr. Whitfield, Birmingham; Mr. Parsons, Peckham; Mr. Robinson, Sheffield; Mr. Walker, Dudley; Dr. Hayman, Sandown; Mr. Clouston, Hay; Mr. Nash, Box; Dr. Mudd, Storrington; Mr. Hitchen, Barrow-in-Furness; Mr. Roberts, Uxbridge; Mr. Flockton, Snettisham; Mr. Tennant, Fence Houses; Mr. Franklin, Newcastle; Mr. Belk, Middlesborough; Messrs. MacNiven and Co., Edinburgh; Mr. Fisher, Edinburgh; Mr. Hodge, Paisley; Mr. Fitzgerald, Newfoundland; Mr. Smith, Manchester; Mr. Armstrong, South Shields; Mr. Greenwood, Liverpool; Messrs. Thompson and Cook, Hull; Mr. Dunn, Sandwich; Dr. Swete, Leamington; Mr. Moore, Skelmersdale; Dr. Frank, Cannes; Messrs. Kinloch and Co., London; Mr. W. J. Smith, Greenwich; Dr. Mundie, Eastbourne; Mr. Boyall, Grantham; Mr. Elliott, Whittlesea; Mr. Eddowes, Shrewsbury; Mr. Schacht, Clifton; Mr. Ellingworth, Oakham; Mr. Clunn, Tenby; Mr. Whiteley, Leicester; Dr. Rogers, London; Mr. Everett, Nottingham; Dr. Aldridge, Plympton; Mr. Hayes, Basingstoke; Dr. Shannon, Ropesley; Messrs. Crosby and Johnson, Salford; Mr. Deane, Barrow-in-Furness; Dr. Thornton, Dewsbury; Mr. Surman, Kettering; Mr. Lewis, Aldborough; Mr. Lucas, Cambridge; Medicus, Leeds; Delta, Petersfield; C. M., London.

Newcastle Daily Chronicle, Berwick Advertiser, Brighton Daily News, Hereford Journal, Brighton Examiner, Cork Constitution, Manchester Guardian, Surrey Advertiser, Huddersfield Daily Chronicle, Brighton Times, Western Morning News, East London Observer, Royal Cornwall Gazette, Welshman, Brighton Gazette, West Britain and Cornwall Advertiser, and *Western Mail* have been received.

Medical Diary for the ensuing Week.

Monday, Feb. 1.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations, 10½ A.M. each day, and at the same hour.
ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1½ P.M. each day, and at the same hour.
ST. MARK'S HOSPITAL.—Operations, 9 A.M. and 2 P.M.
METROPOLITAN FREE HOSPITAL.—Operations, 2 P.M.
ROYAL INSTITUTION.—3 P.M. General Monthly Meeting.
ROYAL COLLEGE OF SURGEONS OF ENGLAND.—4 P.M. Prof. Erasmus Wilson, "On Dermatology."
ODONTOLOGICAL SOCIETY OF GREAT BRITAIN.—8 P.M.
MEDICAL SOCIETY OF LONDON.—8½ P.M. Lettsomian Lectures: Mr. C. F. Maunder, "On Ligature of an Artery to Arrest Traumatic Inflammation."

Tuesday, Feb. 2.

GUY'S HOSPITAL.—Operations, 1½ P.M., and on Friday at the same hour.
WESTMINSTER HOSPITAL.—Operations, 2 P.M.
NATIONAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.
WEST LONDON HOSPITAL.—Operations, 3 P.M.
ROYAL INSTITUTION.—3 P.M. Mr. E. Ray Lankester, "On the Pedigree of the Animal Kingdom."
PATHOLOGICAL SOCIETY OF LONDON.—8½ P.M. The following Specimens will be exhibited:—Elongation of Bones of Lower Extremity in a Case of Diseased Knee (living specimen); Sarcoma of Sclerotic; Microscopical Specimens of Melanoid Sarcoma in a Cod; Microscopical Specimen of Cancer; Invaginated Intestine; Syphilitic Disease of Rectum; Enlarged Liver and Spleen without Leucæmia; Hæmorrhagic Gout; Cancerous Breast and Liver; Fatty Degeneration of Muscles of Thigh; Contraction of Coronary Arteries; Obstruction of Renal Artery; Fibroid Disease of Heart; Fatty Tumour removed during Herniotomy; Melanotic Sarcoma; &c. &c.

Wednesday, Feb. 3.

MIDDLESEX HOSPITAL.—Operations, 1 P.M.
ST. MARY'S HOSPITAL.—Operations, 1½ P.M.
ST. BARTHOLOMEW'S HOSPITAL.—Operations, 1½ P.M., and on Saturday at the same hour.
ST. THOMAS'S HOSPITAL.—Operations, 1½ P.M., and on Saturday at the same hour.
KING'S COLLEGE HOSPITAL.—Operations, 2 P.M., and on Saturday at 1½ P.M.
GREAT NORTHERN HOSPITAL.—Operations, 2 P.M.
UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M., and on Saturday at the same hour.
LONDON HOSPITAL.—Operations, 2 P.M.
SAMARITAN FREE HOSPITAL FOR WOMEN AND CHILDREN.—Operations, 3½ P.M.
ROYAL COLLEGE OF SURGEONS OF ENGLAND.—4 P.M. Prof. Erasmus Wilson, "On Dermatology."
OBSTETRICAL SOCIETY OF LONDON.—8 P.M. Inaugural Address by the President, Dr. Priestley.—Dr. Braxton Hicks, "On three Cases of Cephalotripsy."—Dr. Oswald, "Notes of a Case of Suppurating Tumour of the Left Ovary, with Specimen."—Mr. Ashburton Thompson, "On Zinc Phosphate in Amenorrhœa."—Dr. Trestrail, "On the Treatment of Rigid Perineum, and the Avoidance of its Rupture."—Dr. Liebman (of Trieste): "Clinical Notes on the Early Course of Cancer of the Cervix Uteri."—And other communications.

Thursday, Feb. 4.

ST. GEORGE'S HOSPITAL.—Operations 1 P.M.
ROYAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.
CENTRAL LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M., and on Friday at the same hour.
ROYAL INSTITUTION.—3 P.M. Prof. Tyndall, "On Subjects connected with Electricity."
HARVEIAN SOCIETY OF LONDON.—7½ P.M. Council Meeting.—8 P.M. Dr. W. H. Day, "On Cerebral Complications in the Typhoid Fever of Children."

Friday, Feb. 5.

ST. GEORGE'S HOSPITAL.—Ophthalmic Operations, 1½ P.M.
ROYAL SOUTH LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M.
ROYAL COLLEGE OF SURGEONS OF ENGLAND.—4 P.M. Prof. Erasmus Wilson, "On Dermatology."
ROYAL INSTITUTION.—8 P.M. Weekly Evening Meeting.—9 P.M. Mr. J. Dewar, "On the Physiological Action of Light."

Saturday, Feb. 6.

HOSPITAL FOR WOMEN, Soho-square.—Operations, 9½ A.M.
ROYAL FREE HOSPITAL.—Operations, 9 A.M. and 2 P.M.
CHARING-CROSS HOSPITAL.—Operations, 2 P.M.
ROYAL INSTITUTION.—3 P.M. Mr. J. T. Wood, "On the Discovery of the Temple of Diana, and other Results of the Government Excavations at Ephesus."

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